ACCESS SERVICE

Regulations, Rates and Charges

applying to the provision of

intrastate interexchange

Access Services

within the operating territory of the

Arizona Telephone Company

in the State of

Arizona

Issued: October 17. 1996
Effective: December 1. 1996

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CONCURRING CARRIERS

NO CONCURRING CARRIERS

CONNECTING CARRIERS

NO CONNECTING CARRIERS

OTHER PARTICIPATING CARRIERS

NO OTHER PARTICIPATING CARRIERS

REGISTERED SERVICE MARKS
NONE

REGISTERED TRADEMARKS
NONE

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EXPLANATION OF SYMBOLS

(C) - To signify changed regulation
(D) - To signify discontinued rate or regulation
(I) - To signify increase
(M) - To signify matter relocated without change
(N) - To signify new rate or regulation
(R) - To signify reduction
(S) - To signify reissued matter
(T) - To signify a change in text but no change in rate or regulation
(Z) - To signify a correction

EXPLANATION OF ABBREVIATIONS

ac -Alternating current
AML -Actual Measured Loss
AN1 -Automatic Number Identification
AT&T -American Telephone and Telegraph Company
BD -Business Day
BHMC -Busy Hour Minutes of Capacity
c o -Central Office
CPE -Customer Provided Equipment
DA -Directory Assistance
dB -decibel
dBrnC -Decibel Reference Noise C-Message Weighting
dbrnCO -Decibel Reference Noise C-Message Referenced to 0
dBv -Decibel(s) relative to 1 volt (reference)
dBvl -Decibel(s) relating to 1 volt (reference)
dc -direct current
EAS -Extended Area Service
EDD -Envelop Delay Distortion
ELEPL -Equal Level Echo Path Loss
EML -Expected Measured Loss
EPL -Echo Path Loss
ERL -Echo Return Loss
ESS -Electronic Switching System
ESSX -Electronic Switching System Exchange
f -frequency

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EXPLANATION OF ABBREVIATIONS

FID	-Field Identifier
F.C.C.	-Federal Communications Commission
FX	-Foreign Exchange
Hz	-Hertz
IC	-Interexchange Carrier
ICB	-Individual Case Basis
ICL	-Inserted Connection Loss
kbps	-Kilobits per second
kHz	-kilohertz
LATA	-Local Access and Transport Area
Ma	-milliamperes
Mbps	-Megabits per second
MHz	-Megahertz
MMUC	-Minimum Monthly Usage Charge
MRC	-Monthly Recurring Charge
MT	-Metallic
MTS	-Message Telecommunications Service(s)
NPA	-Numbering Plan Area
NRC	-Nonrecurring Charge
NTS	-Non-Traffic Sensitive
NXX	-Three-Digit Central Office Code
OTPL	-Zero Transmission Level Point
PBX	-Private Branch Exchange
PCM	-Pulse Code Modulation
POT	-Point of Termination
rms	-root-mean-square
RSM	-Remote Switching Modules
RSS	-Remote Switching Systems
SRL	-Singing Return Loss
SSN	-Switched Service Network
swc	-Serving Wire Center
TES	-Telephone Exchange Service(s)
TLP	-Transmission Level Point
TSPS	-Traffic Sensitive Position System
usoc	-Uniform Service Order Code
VG	-Voice Grade
V & H	-Vertical & Horizontal
WATS	-Wide Area Telecommunications Service(s)

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REFERENCE TO OTHER TARIFFS

Whenever reference is made in this tariff to other tariffs of the Telephone Company, the reference is made to the tariffs in force as of the effective date of this tariff, and to amendments thereto and successive issues thereof.

REFERENCE TO TECHNICAL PUBLICATIONS

The following technical publications are referenced in this tariff and may be obtained from Bell Communications Research, Inc., Distribution Storage Center, 60 New England Avenue, Picataway, New Jersey 08854-4196, (201) 981-5600.

Technical Reference:

1. PUB 41004
2. PUB TR-NPL-000334
3. PUB TR-NPL-000335

The following technical publication is referenced in this tariff and may be obtained from the Bell System for Technical Education, Room F214, 6200 Route 53, Lisle, IL 60532.

Telecommunications Transmission Engineering
Volume 3 - Networks and Services (Chapter 6 and 7)

The following technical publication is referenced in this tariff and may be obtained from the National Exchange Carrier Association, Inc., Group Manager - Tariff Administration, 100 S. Jefferson Road, Whippany, N.J. 07981 and the Federal Communication Commission's commercial contractor.

PUB AS No. 1, Issue II

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1. Application of Tariff

1.1 This tariff contains regulation, rates and charges applicable to the provision of Carrier Common Line, Switched Access, Special Access Services, and Billing and Collection hereinafter referred to collectively as service(s), provided by Arizona Telephone Company.

1.2 The provision of such services by the Telephone Company as set forth in this tariff does not constitute a joint undertaking with the customer for the furnishing of any service.

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2.1 Undertaking of the Telephone Company

2.1.1 Scope

(A) The Telephone Company does not undertake to transmit messages under this tariff.

(B) The Telephone Company shall be responsible only for the installation, operation and maintenance of the services it provides.

(C) The Telephone Company will, for maintenance purposes, test its services only to the extent necessary to detect and/or clear troubles.

(D) Services are provided 24 hours daily, seven days per week, except as set forth in other applicable sections of this tariff.

(E) The Telephone Company does not warrant that its facilities and services meet standards other than those set forth in this tariff.

2.1.2 Limitations

(A) The customer may not assign or transfer the use of services provided under this tariff; however, where there is not interruption of use or relocation of the services, such assignment or transfer may be made to:

(1) another customer, whether and individual, partnership, association or corporation, provided the assignee or transferee assumes all outstanding indebtedness for such services, and the unexpired portion of the minimum period and the termination liability applicable to such services, if any; or

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(2) a court-appointment receiver, trustee or other person acting pursuant to law in bankruptcy, receivership, reorganization, insolvency, liquidation or other similar proceedings, provided the assignee or transferee assumes the unexpired portion of minimum period and the termination liability applicable to such services, if any.

In all cases of assignment or transfer, the written acknowledgment of the Telephone Company is required prior to such assignment or transfer which acknowledgment shall be made within 15 days from the receipt of notification. All regulations and conditions contained in this tariff shall apply to such assignee or transferee.

The assignment or transfer of services does not relieve or discharge the assignor or transferor from remaining jointly or severally liable with the assignee or transferee for any obligations existing at the time of the assignment or transfer.

(B) The use and restoration of services shall be provided on a first-come first-served basis. The use and restoration of services shall be in accordance with Part 64, Subpart D, Appendix A, of the Federal Communications Commission's Rules and Regulations, which specifies the priority system for such activities.

2.1.3 Liability

(A) The Telephone Company's liability, if any, for its willful misconduct is not limited by this tariff. With respect to any other claim or suit, by a customer or by any others, for damages associated with the installation, provision, termination, maintenance, repair or restoration of service, and subject to the provisions of (B) through (H) following, the Telephone Company's liability shall not exceed an amount equal to the proportionate charge for the service for the period during which the service was affected.

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This liability for damages shall be in additional to any amounts that may otherwise be due the customer under this tariff as a Credit Allowance for a Service Interruption.

(B) The Telephone Company shall not be liable for any act or omission of any other carrier or customer providing a portion of a service, nor shall the Telephone Company for its own act or omission hold liable any other carrier or customer providing a portion of a service.

(C) The Telephone Company is not liable for damages to the customer premises resulting from the furnishing of a service, including the installation and removal of equipment and associated wiring, unless the damage is caused by the Telephone Company's negligence.

(D) The Telephone Company shall be indemnified, defended and held harmless by the end user against any claim, loss or damage arising from the end user's use of services offered under this tariff, involving:

(1) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the end user's own communications;

(2) Claims for patent infringement arising from the end user's acts combining or using the service furnished by the Telephone Company in connection with facilities or equipment furnished by the end user or customer or;

(3) All other claims arising out of any act or omission of the end user in the course of using services provided pursuant to this tariff.

(E) The Telephone Company shall be indemnified, defended and held harmless by the customer against any claim, loss or damage arising from the customer's use of services offered under this tariff involving:

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(1) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the customer's own communications;

(2) Claims for patent infringement arising from the customer's acts combining or using the service furnished by the Telephone Company in connection with facilities or equipment furnished by the end user or customer or;

(3) All other claims arising out of any act or omission of the customer in the course of using services provided pursuant to this tariff.

(F) The Telephone Company does not guarantee or make any warranty with respect to its services when used in an explosive atmosphere. The Telephone Company shall be indemnified, defended and held harmless by the customer from any and all claims by any person relating to such customer's use of services so provided.

(G) No license under patents (other than the limited license to use) is granted by the Telephone Company or shall be implied or arise by estoppel, with respect to any service offered under this tariff.

(H) The Telephone Company's failure to provide or maintain services under this tariff shall be excused by labor difficulties, governmental orders, civil commotions, criminal actions taken against the Telephone Company, acts of God and other circumstances beyond the Telephone Company's reasonable control, subject to the Credit Allowance for a Service Interruption as set forth in 2.4.4 following.

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2.1.4 Provision of Services

The Telephone Company, to the extent that such services are or can be made available with reasonable effort, and after provision has been made for the Telephone Company's telephone exchange services, will provide to the customer upon reasonable notice services offered in other applicable sections of this tariff at rates and charges specified therein.

2.1.5 Installation and Termination of Services

The services provided under this tariff (A) will include any entrance cable or drop wiring and wire or intrabuilding cable to that point where provision is made for termination of the Telephone Company's outside distribution network facilities at a suitable location inside a customer-designated premises and (B) will be installed by the Telephone Company to such Point of Termination.

2.1.6 Maintenance of Services

The services provided under this tariff shall be maintained by the Telephone Company. The customer or others may not rearrange, move disconnect, remove or attempt to repair any facilities provided by the Telephone Company, other than by connection or disconnection to any interface means used, except with the written consent of the Telephone Company.

2.1.7 Chances and Substitutions

Except as provided for equipment and systems subject to FCC Part 68 Regulations at 47 C.F.R. Section 68.110(b), the Telephone Company may, where such action is reasonably required in the operation of its business,

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(A) substitute, change or rearrange any facilities used in providing service under this tariff, including but not limited to, (1) substitution of different metallic facilities, (2) substitution of carrier or derived facilities for metallic facilities used to provide other than metallic facilities and (3) substitution of metallic facilities for carrier or derived facilities used to provide other than metallic facilities,

(B) change minimum protection criteria, change operating or maintenance characteristics of facilities or change operations or procedures of the Telephone Company. In case of any such substitution, change or rearrangement, the transmission parameters will be within the range as set forth in 6. and 7. following. The Telephone Company shall not be responsible if any such substitution, change or rearrangement renders any customer furnished services obsolete or requires modification or alteration thereof or otherwise affects their use or performance. If such substitution, change or rearrangement materially affects the operating characteristics of the facility, the Telephone Company will provide reasonable notification to the customer in writing. Reasonable time will be allowed for any redesign and implementation required by the change in operating characteristics. The Telephone Company will work cooperatively with the customer to determine reasonable notification procedures.

2.1.8 Refusal and Discontinuance of Service

(A) Unless the provisions of 2.2.1(B) or 2.5 following apply, if a customer fails to comply with 2.1.6 preceding or 2.2.2, 2.3.1, 2.3.4, 2.3.5 or 2.4 following, including any payments to be made by it on the dates an times herein specified, the Telephone Company may, on thirty (30) days written notice by Certified U.S. Mail to the person designated by that customer to receive such notices of noncompliance, refuse additional applications for service and/or refuse to complete any pending orders for service by the non-complying customer at any time thereafter.

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If the Telephone Company does not refuse additional applications for service on the date specified in the thirty (30) days notice, and the customer's noncompliance continues, nothing contained herein shall preclude the Telephone Company's right to refuse additional applications for service to the non-complying customer without further notice.

(B) Unless the provisions of 2.2.1(B) or 2.5 following apply, if a customer fails to comply with 2.1.6 preceding or 2.2.2, 2.3.1, 2.3.4, 2.3.5 or 2.4 following, including any payments to be made by it on the dates and times herein specified, the Telephone Company may, on thirty (30) days written notice by Certified U.S. Mail to the person designated by that customer to receive such notices of noncompliance, discontinue the provision of the services to the non-complying customer at any time thereafter.

In the case of such discontinuance, all applicable charges, including termination charges shall become due. If the Telephone Company does not discontinue the provision of the services involved on the date specified in the thirty (30) days notice, and the customers; noncompliance continues, nothing contained herein shall preclude the Telephone Company's right to discontinue the provision of the services to the non-complying customer without further notice.

2.1.9 Notification of Service-Affecting Activities

The Telephone Company will provide the customer reasonable notification of service-affecting activities that may occur in normal operation of its business. Such activities may include, but are not limited to, equipment or facilities additions, removals or rearrangements, routine preventative maintenance and major switching office change-out. Generally such activities are not individual customer service specific, they affect many customers' service. No specific advance notification period is applicable to all service activities. The Telephone Company will work cooperatively with the customer to determine the notification requirements.

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2.1.10 Coordination with Respect to Network Contingencies

The Telephone Company intends to work cooperatively with the customer to develop network contingency plans in order to maintain maximum network capability following natural or man-made disasters which affect telecommunications services.

2.1.11 Provision and Ownership of Telephone Numbers

The Telephone Company reserves the reasonable right to assign, designate or change telephone numbers, any other call number designations associated with Access Services, or the Telephone Company serving central office prefixes associated with such numbers, when necessary in the conduct of its business. Should it become necessary to make a change in such number(s), the Telephone Company will furnish to the customer 6 months notice, and explanation of the reason(s) for such change(s).

2.2 Use

2.2.1 Interference or Imnairment

(A) The characteristics and methods of operation of any circuits, facilities or equipment provided by other than the Telephone Company and associated with the facilities utilized to provide services under this tariff shall not interfere with or impair service over any facilities of the Telephone Company, its affiliated companies, or its connecting and concurring carriers involved in its services, cause damage to their plant, impair the privacy of any communications carried over their facilities or create hazards to the employees of any of them or the public.

(B) Except as provided for equipment or systems subject to the FCC Part 68 Rules in 47 C.F.R. Section 68.108, if such characteristics or methods of operation are not in accordance with (A) preceding, the Telephone Company will, where practicable, notify the customer that temporary discontinuance of the use of a service may be required; however, where prior notice is not practicable,

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nothing contained herein shall be deemed to preclude the Telephone Company's right to temporarily discontinuance, the customer will be promptly notified and afforded the opportunity to correct the condition which gave rise to the temporary discontinuance. During such period of temporary discontinuance, credit allowance for service interruptions as set forth in 2.4.4 following is not applicable.

2.2.2 Unlawful Use

The service provided under this tariff shall not be used for an unlawful purpose.

(A) The Telephone Company shall, upon written request from a customer, terminate service to any subscriber of a customer identified by the customer as having utilized that customer's service and/or facilities in the completion of abusive telephone calls. Service shall be terminated by the Telephone Company as provided for in its general and/or local exchange service.

(B) In such instances when termination occurs, as in (A) preceding, the Telephone Company shall be indemnified, defended and held harmless by the customer against any claim, loss or damage arising from the Telephone Company's actions in terminating such service.

2.3 Obligations of the Customer

2.3.1 Damages

The customer shall reimburse the Telephone Company for damages to Telephone Company facilities utilized to provide services under this tariff caused by the negligence or willful act of the customer, or resulting from the customer's improper use of the Telephone Company facilities, or due to malfunction of any facilities or equipment provided by other than the Telephone Company.

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Nothing in the foregoing provision shall be interpreted to hold one customer liable for another customer's actions. The Telephone Company will, upon reimbursement for damages, cooperate with the customer in prosecuting a claim against the person causing such damage and the customer shall be subrogated to the right of recovery by the Telephone Company for the damages to the extent of such payment.

2.3.2 Ownership of Facilities and Theft

Facilities utilized by the Telephone Company to provide service under the provisions of this tariff shall remain the property of the Telephone Company. Such facilities shall be returned to the Telephone Company by the customer, whenever requested, within a reasonable period following the request in as good condition as reasonable wear will permit.

2.3.3 Equipment Space and Power

The customer shall furnish or arrange to have furnished to the Telephone Company, at no charge, equipment space and electrical power required by the Telephone Company to provide services under this tariff at the points of termination of such services. The selection of ac or dc power shall be mutually agreed to by the customer and the Telephone Company. The customer shall also make necessary arrangements in order that the Telephone Company will have access to such spaces at reasonable times for installing, testing, repairing or removing Telephone Company services.

2.3.4 Availability for Testing

The services provided under this tariff shall be available to the Telephone Company at times mutually agreed upon in order to permit the Telephone Company to make tests and adjustments appropriate for maintaining the services in satisfactory operating condition. Such tests and adjustments shall be completed within a reasonable time. No credit will be allowed for any interruptions involved during such tests and adjustments.

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2.3.5 Balance

All signals for transmission over the services provided under this tariff shall be delivered by the customer balanced to ground.

2.3.6 Design of Customer Services

Subject to the provisions of 2.1.7 preceding, the customer shall be solely responsible, at its own expense, for the overall design of its services and for any redesigning or rearrangement of its services which may be required because of changes in facilities, operations or procedures of the Telephone Company, minimum protection criteria or operating or maintenance characteristics of the facilities.

2.3.7 Reference to the Telenhone Comnanv

The customer may advise End Users that certain services are provided by the Telephone Company in connection with the service the customer furnishes to the End Users; however, the customer shall not represent that the Telephone Company jointly participates in the customer's services.

2.3.8 Claims and Demands for Damages

(A) With respect to claims of patent infringement made by third persons, the customer shall defend, indemnify, protect and save harmless the Telephone Company from and against all claims arising out of the combining with, or use in connection with, the services provided under this tariff, any circuit, apparatus, system or method provided by the customer.

(B) The customer shall defend, indemnify and save harmless the Telephone Company from and against any suits, claims, losses or damages, including punitive damages, attorney fees and court costs by third persons arising out of the construction, installation, operation, maintenance, or removal of the customer's circuits, facilities, or equipment connected to the Telephone Company's services provided under this tariff, including, without limitation,

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Workmen's Compensation claims, actions for infringement of copyright and/or unauthorized use of program material, libel and slander actions based on the content of communications transmitted over the customer's circuits, facilities or equipment, and proceedings to recover taxes, fines, or penalties for failure of the customer to obtain or maintain in effect any necessary certificates, permits, licenses, or other authority to acquire or operate the services provided under this tariff; provided however, the foregoing indemnification shall not apply to suits, claims, and demands to recover damages for damage to property, death, or personal injury unless such suites, claims or demands are based on the tortuous conduct of the customer, its officers, agents or employees.

(C) The customer shall defend, indemnify and save harmless the Telephone Company from and against any suits, claims, losses or damages, including punitive damages, attorney fees and court costs by the customer or third parties arising out of any act or omission of the customer in the course of using services provided under this tariff.

2.3.9 Coordination with Respect to Network Contingencies

The customer shall, in cooperation with the Telephone Company, coordinate in planning the actions to be taken to maintain maximum network capability following natural or man-made disasters which affect telecommunications services.

2.3.10 Jurisdictional Report Requirements

(A) Jurisdictional Reports

(1) When a customer orders Feature Group A or B Switched Access Service from the primary carrier, which is capable of connecting to the end user in the Telephone Company's serving area, the customer shall provide a copy of such order to the telephone company. The Telephone Company

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will apply the customer provided projected intrastate percentage of intrastate usage to the total Feature Group A and Feature Group B minutes originating from the Telephone Company's end offices to the Customer's premises in the primary carrier's serving area or terminating from the Customer's designated premises to the Telephone Company's end office.

(2) When a customer orders Feature Group C or D Switched Access Service, the Telephone Company will, unless the customer provides the projected intrastate percentage for intrastate usage in its order, determine the projected intrastate percentage as follows. For originating access minutes, the projected intrastate percentage will be developed on a monthly basis by end office when the Feature Group C or D Switched Access Service access minutes are measured by dividing the measured intrastate originating access minutes (the access minutes where the calling number and the called number are in the same state) by the total originating access minutes.

For terminating access minutes, the data used by the Telephone Company to develop the projected intrastate percentage for originating access minutes will be used to develop projected intrastate percentage for such terminating access minutes.

The Telephone Company will designate the number obtained by subtracting the projected interstate percentage for originating and terminating access minutes calculated by the Telephone Company from 100 (100 - Telephone Company calculated projected interstate percentage = intrastate percentage) as the projected intrastate percentage of use.

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(3) Effective on the first of January, April, July and October of each year the customer shall update the interstate and intrastate jurisdictional report. The customer shall forward to the Telephone Company, to be received no later than 15 days after the first of each such month, a revised report showing the interstate and intrastate percentage of use for the past three months ending the last day of December, March, June and September, respectively, for each service arranged for intrastate use. Additionally, where the customer utilizes FGA Switched Access Service for calls between a Primary Exchange Carrier and a Secondary Exchange Carrier within the same Extended Area Service calling area, and/or Feature Group B Switched Access Service for calls between a Primary Exchange Carrier's access tandem and a subtending Secondary Exchange Carrier, where the Primary and Secondary Exchange Carriers are not the same Telephone Company, a copy of the revised report will be provided by the customer to the Telephone Company.

The revised report will serve as the basis for the next three months billing and will be effective on the bill date for that service. No prorating or back billing will be done based on the report.

If the customer does not supply the reports, the Telephone Company will assume the percentages to be the same as those provided in the last quarterly report. For those cases in which a quarterly report has never been received from the customer, the Telephone Company will assume the percentages to be the same as those provided in the order for service as set forth in (1) preceding.

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2.3.11 Determination of Intrastate Charges for Mixed Interstate and Intrastate Access Service

When mixed interstate and intrastate Access Service is provided, all charges (i.e., nonrecurring, monthly and/or usage) including optional features charges, will be prorated between interstate and intrastate. The percentage provided in the reports as set forth in 2.3.10(A) preceding will serve as the basis for prorating the charges. The percentage of an Access Service to be charged as intrastate is applied in the following manner:

(A) For monthly and nonrecurring chargeable rate elements, multiply the percent intrastate use times the quantity of chargeable elements times the state tariff rate per element.

(B) For usage sensitive (i.e., access minutes and calls) chargeable rate elements, multiply the percent intrastate use times actual use(i.e., measured or Telephone Company assumed average use) times the stated tariff rate.

The intrastate percentage will change as revised usage reports are submitted as set forth in 2.3.10 preceding.

2.4 Payment Arrangements and Credit Allowances

2.4.1 Payment of Rates. Charges and Deposits

(A) The Telephone Company will, in order to safeguard its interests, only require a customer which has a proven history of late payments of the Telephone Company or does not have established credit, to make a deposit prior to or at any time after the provision of a service to the customer to be held by the Telephone Company as a guarantee of the payment of rates charges. No such deposit will be required of a customer which is a successor of a company which has established credit and has no history of late payments to the Telephone Company.

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Such deposit may not exceed the actual or estimated rates and charges for the service for a two month period. The fact that a deposit has been made in no way relieves the customer from complying with the Telephone Company's regulations as to the prompt payment of bills. At such time as the provision of the service to the customer is terminated, the amount of the deposit will be credit to the customer's account and any credit balance which may remain will be refunded.

Such a deposit will be refunded or credited to the account when the customer has established credit or, in any event, after the customer has established a one-year prompt payment record at any time prior to the termination of the provision of the service to the customer. In case of a cash deposit, for the period the deposit is held by the Telephone Company, the customer will receive interest at the same percentage rate as that set forth in (B)(3)(b)(I) or in (B)(3)(b)(II), whichever is lower. The rate will be compounded daily for the number of days from the date the customer deposit is received by the Telephone Company to and including the date such deposit is credited to the customer's account or the date the deposit is refunded by the Telephone Company. Should a deposit be credit to the customer's account, as indicated above, no interest will accrue on the deposit from the date such deposit is credited to the customer' s account.

(B) The Telephone Company shall bill on a current basis all charges incurred by the credits due to the customer under this tariff attributable to services established or discontinued during the preceding billing period.

In addition, the Telephone Company shall bill in advance charges for all services to be provided during the ensuing billing period except for charges associated with service usage and for the Federal Government which will be billed in arrears. The bill day (i.e., the billing date of a bill for a customer for Access Service under this tariff), the period of service each bill covers and the payment date will be as follows:

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(1) The Telephone Company will establish a bill day each month for each customer account. The bill will cover nonusage sensitive service charges per month charges for the ensuing billing period for which the bill is rendered, any known unbilled nonusage sensitive charges for prior periods and unbilled usage charges for the period after the last bill day through the current bill day. Any known unbilled usage charges for prior periods and any known unbilled adjustments will be applied to this bill. Payment for such bills is due as set forth in (2) following. If a payment is not received by the payment date, as set forth in (2) following in immediately available funds, a late payment penalty will apply as set forth in (2) following.

(2) (a) All bills dated as set forth in (1) preceding for service, provided to the customer by the Telephone Company are due 30 days (payment date) after the bill day or by the next bill date (i.e., same date in the following month as the bill date), whichever is the shortest interval, except as provided herein, and are payable in immediately available funds. If such payment date would cause payment to be due on a Saturday, Sunday, or Holiday (i.e., New Year's Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, the second Tuesday in November and a day when Washington's Birthday, Memorial Day or Columbus Day is legally observed), payment for such bills will be due from the customer as follows:

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If such payment date falls on a Sunday or on a Holiday which is observed on a Monday, the payment date shall be the first non-Holiday day following such Sunday or Holiday. If such payment date falls on a Saturday or on a Holiday which is observed on Tuesday, Wednesday, Thursday or Friday, the payment date shall be the last non-Holiday day preceding such Saturday or Holiday.

(b) Further, if any portion of the payment is received by the Telephone Company after the payment date as set forth in (a) preceding, or if any portion of the payment is received by the Telephone Company in funds which are not immediately available to the Telephone Company, then a late payment penalty shall be due to the Telephone Company. The late payment penalty shall be the portion of the payment not received by the payment date times a late factor. The late factor shall be the lessor of:

(I) the highest interest rate (in decimal value) which may be levied by law for commercial transactions, computed daily for the number of days from the payment date to and including the date that the customer actually makes the payment to the Telephone Company, or

(II) 0.000590 per day, compounded daily for the number of days from the payment date to and including the date that the customer actually makes the payment to the Telephone Company.

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(c) In the event that a billing dispute concerning any charges billed to the customer by the Telephone Company is resolved in favor of the Telephone Company, any payments withheld pending settlement of the dispute shall be subject to the late payment penalty set forth in (b) preceding. If the customer disputes the bill on or before the payment date, and pays the undisputed amount on or before the payment date, any late payment charge for the disputed amount will not start until 10 days after the payment date.

(d) In the event that a billing dispute concerning any charges billed to the customer by the Telephone Company is resolved in favor of the customer, no late payment penalty will apply to the disputed amount. In addition, if the customer disputes the billed amount and pays the total amount (i.e., the nondisputed amount and the disputed amount) on or before the payment date and the billing dispute is resolved in favor of the customer, the customer will receive a credit for a disputed amount penalty from the Telephone Company if the billing dispute is not resolved within 10 working days, whichever date is the later date. The disputed amount penalty shall be the disputed amount resolved in the customer's favor times a penalty factor. The penalty factor is set form in (b) preceding.

(C) When a payment for Access Service charges billed under this tariff is due to the Telephone Company from the customer as set forth in (B)(2) preceding on the same payment date that a Purchase of Accounts Receivable net purchase amount is due to the customer from the Telephone Company, the Telephone Company may, with at least 30 days notice to the customer, net the payment for customer Access Service charges with the net purchase amount. The Telephone Company will pay

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the net amount to the customer on the payment date when such net amount is due to the customer or require the customer to pay the Telephone Company the net amount when such net amount is due to the Telephone Company. If either party does not make the payment on the payment date, a late payment penalty as set forth in (B)(2) preceding applies.

(D) Adjustments for the quantities of services established or discontinued in any billing period beyond the minimum period set forth for services in other sections of this tariff will be prorated to the number of days or major fraction of days based on a 30 day month. The Telephone Company will, upon request and if available, furnish such detailed information as may reasonably be required for verification of any bill.

(E) When a rate as set forth in this tariff is shown to more than two decimal places, the charges will be determined using the rate shown. The resulting amount will then be rounded to the nearest penny (i.e., rounded to two decimal places).

2.4.2 Minimum Periods

The minimum period for which services are provided and for which rates and charges are applicable is one month.

When a service is discontinued prior to the expiration of the minimum period, charges are applicable, whether the service is used or not, as follows:

(A) When a service with a one month minimum period is discontinued prior to the expiration of the minimum period, a one month charge will apply at the rate level in effect at the time service is discontinued.

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(B) When a service with a minimum period greater than one month is discontinued prior to the expiration of the minimum period, the applicable charge will be the lesser of (1) the Telephone Company's total nonrecoverable costs less the net salvage value for the discontinued service or (2) the total monthly charges, at the rate level in effect at the time service is discontinued, for the remainder of the minimum period.

2.4.3 Cancellation of an Order for Service

Provisions for the cancellation of an order for service are set forth in other applicable sections of this tariff.

2.4.4 Credit Allowance for Service Interruptions

(A) General

A service is interrupted when it becomes unusable to the customer because of failure of a facility component used to furnish service under this tariff or in the event that the protective controls applied by the Telephone Company result in the complete loss of service by the customer as set forth in 6.4.1 following. An interruption period starts when an inoperative service is reported to the Telephone Company, and ends when the service is operative.

For purposes of administering the following regulations a major fraction shall mean more than half of the incremental credit period using the unit of time in which the service interruption is measured, i.e., 30 seconds, 1 minute, 1 hour. For example a major fraction for a 30 minute period equals 16 minutes for a 24 hour period equals 12 hours and one minute.

(B) When a Credit Allowance Applies

In case of an interruption to any service, allowance for the period of interruption, if not due to the negligence of the customer, shall be as follows:

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(1) For Special Access Services, no credit shall be allowed for an interruption of less than 30 minutes. The customer shall be credited for an interruption of 30 minutes or more at the rate of 1/1440 of the monthly charges for the facility or service for each period of 30 minutes or major fraction thereof that the interruption continues.

The monthly charges used to determine the credit shall be the total of all the monthly rate element charges associated with the service, charged by the Telephone Company.

(2) For Switched Access Service, no credit shall be allowed for an interruption of less than 24 hours. The customer shall be credited for an interruption of 24 hours or more at the rate of 1/30 of the applicable monthly rates of minimum monthly usage charge for each period of 24 hours or major fraction thereof that the interruption continues.

(3) The credit allowance(s) for an interruption or for a series of interruptions shall not exceed the monthly rate and minimum monthly usage charge for the service interrupted in any one monthly billing period.

(C) When a Credit Allowance Does Not Apply

No credit allowance will be made for:

(1) Interruptions caused by the negligence of the customer.

(2) Interruptions of a service due to the failure of equipment or systems provided by the customer or others.

(3) Interruptions of a service during any period in which the Telephone Company is not afforded access to the premises where the service is terminated.

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(4) Interruptions of a service when the customer has released that service to the Telephone Company for maintenance purposes, to make rearrangements, or for the implementation of an order for a change in the service during the time that was negotiated with the customer prior to the release of that service. Thereafter, a credit allowance as set forth in (B) preceding applies.

(5) Periods when the customer elects not to release the service for testing and/or repair and continues to use it on an impaired basis.

(6) An interruption or a group of interruptions, resulting from common cause, for amounts less than one dollar.

(D) Use of an Alternative Service Provided by the Telephone Company

Should the customer elect to use an alternative service provided by the Telephone Company during the period that a service is interrupted, the customer must pay the tariffed rates and charges for the alternative service used.

(E) Temporary Surrender of a Service

In certain instances, the customer may be requested by the Telephone Company to surrender a service for purposes other than maintenance, testing or activity relating to a service order. If the customer consents, a credit allowance will be granted. The credit allowance will be 1/1440 of the monthly rate for each period of 30 minutes or fraction thereof that the service is surrendered. In no case will the credit allowance exceed the monthly rate for the service surrendered in any one monthly billing period.

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2.4.5 Re-establishment of Service Following: Fire, Flood or Other Occurrence

(A) Nonrecurring Charges Do Not Apply

Charges do not apply for the re-establishment of service following a fire, flood or other occurrence attributed to an Act of God provided that:

(1) The service is of the same type as was provided prior to the fire, flood or other occurrence.

(2) The service is for the same customer.

(3) The service is at the same location on the same premises.

(4) The re-establishment of service begins within 60 days after Telephone Company service is available. (The 60 day period may be extended a reasonable period if the renovation of the original location on the premises affected is not practical within the allotted time period.)

(B) Nonrecurring: Charges Apply

Nonrecurring charges apply for establishing service at a different location, on the same premises, or at a different premises pending re-establishment of service at the original location at the rate set forth in 12 following.

2.4.6 Title or Ownership Rights

(A) The payment of rates and charges by Customers for the services offered under the provisions of this tariff does not assign, confer or transfer title or ownership rights to proposals or facilities developed or utilized, respectively, by the Telephone Company in the provision of such services.

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2.4.7 Ordering, Rating and Billing of Access Services Where More Than One Exchange Telephone Company is Involved

(A) When an Access Service is provided by more than one Telephone Company, the Telephone Companies involved will use the following billing method.

The customer will place the order for the service as set forth in Section 5.2.5.

Each Telephone Company receiving an order or copy of the order from the customer, will determine the applicable charges for the portion of the transport service it provides and bills in accordance with its Access Services tariff as follows:

(1) The Billing Percentage (BP) as set forth in Exchange Carrier Association Tariff F.C.C. No. 2 represents the portion of transport service provided by each Telephone Company. The Telephone Company will bill a per minute per mile or per channel mile charge from its end office to the end office to the Interconnection Point with the connecting carrier, the connection carrier's rates may be based on access minutes and mileage. The BP for the Telephone Company is based on its revenue requirements and is calculated as set forth in (2), (3) and (4) following.

(2) For Feature Groups A and B Switched Access Service, multiply the number of access minutes of use times the number of miles times the per minute mile transport rate as set forth in 12.1.C(2) following.

(3) For Feature Group C and D Switched Access Service, multiply the number of access minutes of use times the number of miles times the per minute mile transport rate as set forth in 12.1 .C. (2) following.

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(4) For Special Access, multiply the number of special transport channels times the miles times the channel mileage rate set forth in 12.2.B(2) following.

(B) All other appropriate charges in each Exchange Telephone Company's tariff are applicable.

2.5 Connections

2.5.1 General

Equipment and Systems (i.e., terminal equipment, multiline terminating systems and communications systems) may be connected with Switched, Special Access Service, and Public Packet Data Network furnished by the Telephone Company where such connection is made in accordance with the provisions specified in Technical Reference Publication AS No. 1 and in 2.1 preceding.

2.6 Definitions

Certain terms used herein are defined as follows:

800 Data Base Access Service

The term "800 Data Base Access Service" denotes a service which uses a data base system to identify 800 access customers on a lo-digit basis. For purposes of administering the rules and regulations set forth in this tariff regarding the provision of 800 Database Access, except where otherwise specified, 800 Database Access Service shall include the following service access codes 800, 888, 877, 866, 855, 844, 833, and 822.

800 Series

The term 800 series denotes the service access codes of 800, 888, 877, 866, 855, 833, and 822.

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Access Code

The term "Access Code" denotes a uniform five or seven digit code assigned by the Telephone Company to an individual customer. The five digit code a has the form 10XXX, and the seven digit code has the form 950-XXXX.

Access Minutes

The term "Access Minutes" denotes that usage of exchange facilities in intrastate for the purpose of calculating chargeable usage. On the originating end of an intrastate call, usage is measured from the time the originating end user's call is delivered by the Telephone Company to and acknowledged as received by the customer's facilities connected with the originating exchange. On the terminating end of an intrastate call, usage is measured from the time the call is received by the end user in the terminating exchange. Timing of usage at both originating and terminating ends of an intrastate call shall terminate when the calling or called party disconnects, whichever event is recognized first in the originating and terminating exchanges, as applicable.

Access Tandem

The term "Access Tandem" denotes a Telephone Company switching system that provides a concentration and distribution function for originating or terminating traffic between end offices and a customer's premises.

Answer/Disconnect Supervision

The term "Answer/Disconnect Supervision" denotes the transmission of the switch trunk equipment supervisory signal (off-hook or on-hook) to the customer's point of termination as an indication that the called party has answered or disconnected.

Attenuation Distortion

The term "Attenuation Distortion" denotes the difference in loss at specified frequencies relative to the loss at 1004 Hz, unless otherwise specified.

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Balance (100 Type) Test Line

The term "Balance (100 Type) Test Line" denotes an arrangement in an end office which provides for balance and noise testing.

Bit

The term "Bit" denotes the smallest unit of information in the binary system of notation.

Business Day

The term "Business Day" denotes the times of day that a company is open for business. Generally, in the business community, these are 8:00 A.M. to 5:00 P.M., respectively, with an hour for lunch, Monday through Friday, resulting in a standard forty (40) hour work week.

Busy Hour Minutes of Capacity (BHMC)

The term "Busy Hour Minutes of Capacity (BHMC)" denotes the customer specified maximum amount of Switched Access Service and/or access minutes the customer expects to be handled in an end office switch during any hour in the 8:00 A.M. to 11:00 P.M. period for the Feature Group ordered. This customer furnished BHMC quantity is the input data the Telephone Company uses to determine the number of transmission paths for the Feature Group.

Call

The term "Call" denotes a customer attempt for which the complete address code (e. g . , 0-, 911, or 10 digits) is provided to the serving dial tone office.

Carrier or Common Carrier

See Interexchange Carrier.

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CCS

The term "CCS" denotes a hundred call seconds, which is a standard unit of traffic load that is equal to 100 seconds of usage or capacity of a group of servers (e.g., trunks).

Central Office

The term "Central Office" denotes a local Telephone Company switching system where the Telephone Exchange Service customer station loops are terminated for purposes of interconnection to each other and to trunks.

Central Office Prefix

The term "Central Office Prefix" denotes the first three digits (NXX) of the seven digit telephone number assigned to a customer's Telephone Exchange Service when dialed on a local basis.

Centralized Automatic Reporting on Trunks Testing

The term "Centralized Automatic Reporting on Trunks Testing" denotes a type of testing which includes the capacity for measuring operational and transmission parameters.

Channel(s)

The term "Channel(s)" denotes an electrical or photonic, in the case of fiber optic-based transmission systems, communications path between two or more points of termination.

C-Message Noise

The term "C-Message Noise" denotes the frequency weighted average noise within an idle voice channel. The frequency weighting, called C-message, is used to simulate the frequency characteristic of the 500-type telephone set and the hearing of the average subscriber.

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C-Notched Noise

The term "C-Notched Noise" denotes the C-message frequency weighted noise on a voice channel with a holding tone, which is removed at the measuring end through a notch (very narrow band) filter.

Coin Station

The term "Coin Station" denotes a location where Telephone Company equipment is provided in a public or semipublic place where Telephone Company customers can originate telephonic communications and pay the applicable charges by inserting coins into the equipment.

Committed Information Rate

The term "Committed Information Rate" denotes the transmission speed specified by the customer at which the Frame Relay Access Service network commits to transfer data between two ports.

Common Channel Signaling

The term "Common Channel Signaling" (CCS) denotes a high speed packet switched communications network which is separate (out of band) from the public packet switched and message networks. Its purpose is to carry addressed signaling messages for individual trunk circuits and/or database related services between Signaling Points in the CCS network.

Common Line

The term "Common Line" denotes a line, trunk, pay telephone line or other facility provided under the general and/or local exchange service tariffs of the Telephone Company, terminated on a central office switch. A common line-residence is a line or trunk provided under the residence regulations of the general and/or local exchange service tariffs. A common line-business is a line provided under the business regulations of the general and/or local exchange service tariffs.

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Communications Systems

The term "Communications Systems" denotes channels and other facilities which are capable of communications between terminal equipment provided by other than the Telephone Company.

Customer

The term "Customer(s)" denotes any individual, partnership, association, joint-stock company, trust, corporation, or governmental entity or other entity which subscribes to the service offered under this tariff, including both Interexchange Carriers (ICs) and End Users.

Customer Designated Premises

The term "Customer Designated Premises" denotes the premises specified by the customer for the termination of Access Service.

Customer Message

The term "Customer Message" used herein for Feature Groups A and B Switched Access Service denotes a completed call over an intrastate Feature Group A and B Switched Access Service. A completed call includes both completed calls originated to and terminated from a Feature Group A Switched Access Service. A customer message begins in the originating direction when the off-hook supervision provided by the premise of the ordering customer is received by the Telephone Company recording equipment. A customer message begins in the terminating direction when answer supervision is received by Telephone Company recording equipment indicating the called party has answered. A customer message ends in the originating direction when disconnect supervision is received by Telephone Company recording equipment from the premise of the ordering customer. A customer message ends in the terminating direction when disconnect supervision is received by Telephone Company recording equipment from either the premise of the ordering customer or the called party. The term "Customer Message" used herein for Feature Group C and D Switched Access Service denotes a completed intrastate call originated by a customer's end user.

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Customer Message (Cont'd)

A customer message begins when answer supervision from the premise of the ordering customer is received by Telephone Company recording equipment indicating that the called party has answered. A message ends when disconnect supervision is received by Telephone Company recording equipment from either the premise of the ordering customer's end user or the premise from which the call originated.

Data Transmission (107 Type) Test Line

The term "Data Transmission (107 Type) Test Line" denotes an arrangement which provides for a connection to a signal source which provides test signals for one-way testing of data and voice transmission parameters.

Detail Billing

The term "Detail Billing" denotes the listing of each message and/or rate element for which charges to a customer are due on a bill prepared by the Telephone Company.

Digital Switched 56 Service

A switched access optional feature available with Feature Group C and Feature Group D Access, which provides for data transmission at up to 56 Kilobits per second.

Directory Assistance (Intrastate)

The term "Directory Assistance" denotes the provision of telephone numbers by a Telephone Company operator when the operator location is accessed by a customer by dialing NPA + 555-1212 or 555-1212 or 411.

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Effective 2-Wire

The term "Effective 2-Wire" denotes a condition which permits the simultaneous transmission in both directions over a channel, but it is not possible to insure independent information transmission in both directions. Effective 2-wire channels may be terminated with 2-wire or 4-wire interfaces.

Effective 4-Wire

The term "Effective 4-Wire" denotes a condition which permits the simultaneous independent transmission of information in both directions over a channel. The method of implementing effective 4-wire transmission at the discretion of the Telephone Company (physical, time domain, frequency-domain separation or echo cancellation techniques). Effective 4-wire channels may be terminated with a 2-wire interface at the customer's premises. However, when terminated 2-wire, simultaneous independent transmission cannot be supported because the two wire interface combines the transmission paths into a single path.

End Office Switch

The term "End Office Switch" denotes a local Telephone Company switching system where Telephone Exchange Service customer station loops are terminated for purposes of interconnection to trunks. Included are Remote Switching Modules and Remote Switching Systems served by a host office in a different wire center.

End User

The term "End User" means any customer of an intrastate telecommunications service that is not a carrier, except that a carrier other than a telephone company shall be deemed to be an "end user" when such carrier uses a telecommunications service for administrative purposes, without making such service available to others, directly or indirectly.

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Entry Switch

See First Point of Switching.

Exchange

The term "Exchange" denotes a unit generally smaller than a local access and transport area, established by the Telephone Company for the administration of communications service in a specified area which usually embraces a city, town or village and its environs. It consists of one or more central offices together with the associated facilities used in furnishing communications service within that area. One or more designated exchanges comprise a given local access and transport area.

Exit Message

The Term " Exit Message" denotes an SS7 message sent to an end office by the Telephone Company's tandem switch to mark the Carrier Connect Time when the Telephone Company's tandem sends an Initial Address Message to an interexchange customer.

First-Come First-Served

First-Come First-Served shall be based upon the received time and date stamped by the Telephone Company on complete and accurate customer orders which allow the Telephone Company to initiate its ordering process. Inaccurate or incomplete customer orders shall not be deemed to have been received until such time as the customer corrects such inaccuracies and/or omissions. The customer shall not be penalized for any delay in the Telephone Company review process beyond 24 hours of receipt. Once having been advised of the errors and/or omissions, any delay in correction on the part of the customer shall be added to the received time and date. As facilities and/or equipment become available, customers will be provided service in the order of the earliest received time and date.

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First Point of Switching

The term "First Point of Switching" denotes the first Telephone Company location at which switching occurs on the terminating path of a call proceeding from the customer premises to the terminating end office and, at the same time, the last Telephone Company location at which switching occurs on the originating path of a call proceeding from the originating end office to the customer premises.

Frame

The term "Frame" denotes a group of data bits in a specific format, which enables network equipment to recognize the meaning and purpose of the specific bits.

Frame Relay Access Service

The term "Frame Relay Access Service" denotes a medium-speed, connection-oriented packet-switched data service that allows for the interconnection of Local Area Networks or other compatible end user customer premises equipment for the purpose of connecting to an access customer's interstate network.

Grand-fathered

The term "Grand-fathered" denotes Terminal Equipment, Multiline Terminating Systems and Protective Circuitry directly connected to the facilities utilized to provide services under the provisions of this tariff, and which are considered grand-fathered under Part 68 of the F.C .C's Rules and Regulations.

Host Office

The term "Host Office" denotes an electronic switching system which provides call processing capabilities for one or more Remote Switching Modules or Remote Switching Systems.

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Host Central Office

The term "Host Central Office" denotes an electronic switching unit containing the central call processing functions which service the Host Central Office and its Remote Line Locations.

Immediately Available Funds

The term "Immediately Available Funds" denotes a corporate or personal check drawn on a bank account and funds which are available for use by the receiving party on the same day on which they are received and include U.S. Federal Reserve bank wire transfers, U.S. Federal Reserve notes (paper cash), U.S. coins, U.S. Postal Money Orders and New York Certificates of Deposit.

Individual Case Basis

The term "Individual Case Basis" denotes a condition in which the regulations, if applicable, rates and charges for an offering under the provisions of this tariff are developed based on the circumstances in each case.

Initial Address Message

The term "Initial Address Message" denotes an SS7 message sent in the forward direction to initiate trunk set up, reserve an outgoing trunk and process the information about that trunk along with other data relating to the routing and handling of the call to the next switch.

Interconnection Point

The term "Interconnection Point" denotes the point where the facilities of the Telephone Company interconnects to the facilities of another Local Exchange Carrier to complete a transmission path to the serving wire center, serving the customer designated premises.

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Interexchanee Carrier (IC) or Interexchange Common Carrier

The terms "Interexchange Carrier" (IC) or "Interexchange Common Carrier" denotes any individual, partnership, association, joint-stock company, trust, governmental entity or corporation engaged for hire in intrastate communications by wire or radio, between two or more exchanges.

Intermediate Hub

The term "Intermediate Hub" denotes a wire center at which bridging or multiplexing functions are performed only for customers served by that wire center and wire centers that subtend the hub, as specified in National Exchange Carrier Association, Inc. Tariff F.C.C. No.4.

Interstate Communications

The term "Interstate Communications" denotes both interstate and foreign communications.

Intrastate Communications

The term "Intrastate Communications" denotes any communications within a state subject to oversight by a state regulatory commission as provided by laws of the state of Arizona .

Line Side Connection

The term "Line Side Connection" denotes a connection of a transmission path to the line side of a local exchange switching system.

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Local Area Network

The term "Local Area Network" denotes a network permitting the interconnection and intercommunication of a group of computers.

Local Access and Transport Area

The term "Local Access and Transport Area" denotes a geographic area established for the provision and administration of communications service. It encompasses one or more designated exchanges, which are grouped to serve common social, economic and other purposes.

Local Tandem Switch

The term "Local Tandem Switch" denotes a local Telephone Company switching unit by which local or access telephonic communications are switched to and from an End Office Switch.

Loop Around Test Line

The term "Loop Around Test Line" denotes an arrangement utilizing a Telephone Company central office to provide a means to make certain two-way transmission tests on a manual basis. This arrangement has two central office terminations, each reached by means of separate telephone numbers and does not require any specific customer premises equipment. Equipment subject to this test arrangement is at the discretion of the customer.

Major Fraction Thereof

The term "Major Fraction Thereof" denotes any period of time in excess of 1/2 of the stated amount of time. As an example, in considering a period of 24 hours, a major fraction thereof would be any period of time in excess of 12 hours exactly. Therefore, if a given service is interrupted for a period of thirty-six hours and fifteen minutes, the customer would be given a credit allowance for two twenty-four hour periods for a total of forty-eight hours.

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Message

The term "Message" denotes a "call" as defined preceding.

Milliwatt (102 Type) Test Line

The term "Milliwatt (102 Type) Test Line" denotes an arrangement in an end office which provides a 1004 Hz tone at 0 dBmO for one-way transmission measurements towards the customer's premises from the Telephone Company end office.

Network Control Signaling

The term "Network Control Signaling" denotes the transmission of signals used in the telecommunications system which perform functions such as supervision (control, status, and charge signals), address signaling (e.g., dialing), calling and called number identifications, rate of flow, service selection error control and audible tone signals (call progress signals indicating re-order or busy conditions, alerting, coin denominations, coin collect and coin return tones) to control the operation of the telecommunications system.

Nonsynchronous Test Line

The term "Nonsynchronous Test Line" denotes an arrangement in step-by-step end offices which provides operational tests which are not as complete as those provided by the synchronous test lines, but can be made more rapidly.

North American Numbering Plan

The term "North American Numbering Plan" denotes a three-digit area (Numbering Plan Area) code and a seven-digit telephone number made up of a three-digit Central Office code plus a four-digit station number.

Off-hook

The term "Off-hook" denotes the active condition of Switched Access or a Telephone Exchange Service line,

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On-hook

The term "On-hook" denotes the idle condition of Switched Access or a Telephone Exchange Service line.

Open Circuit Test Line

The term "Open Circuit Test Line" denotes an arrangement in an end office which provides an ac open circuit termination of a trunk or line by means of an inductor of several Henries.

Originating Direction

The term "Originating Direction" denotes the use of access service for the origination of calls from and End User Premises to a customer designated Premises.

Pay Telephone

The term "Pay Telephone" denotes Telephone Company provided instruments and related facilities that are available to the general public for public convenience and necessity, including public and semipublic telephones, and coinless telephones.

Point of Termination

The term "Point of Termination" denotes the point of demarcation within a customer-designated premises at which the Telephone Company's responsibility for the provision of Access Service ends.

Premises

The term "Premises" denotes a building or buildings on continuous property (except Railroad Right-of-Way, etc.) not separated by a public highway.

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Primary Carrier

The Local Exchange Carrier that owns the serving wire center, usually an access tandem that interfaces with the Interexchange Carrier.

Release Message

The term "Release Message" denotes an SS7 message sent in either direction to indicate that a specific circuit is being released.

Remote Switching: Modules and/or Remote Switching Systems

The term "Remote Switching Modules and/or Remote Switching Systems" denotes small, remotely controlled electronic end office switches which obtain their call processing capability from and ESS-type Host Office. The Remote Switching Modules and/or Remote Switching Systems cannot accommodate direct trunks to an IC.

Registered Eauinment

The term "Registered Equipment" denotes the customer's premises equipment which complies with and has been approved within the Registration Provisions of Part 68 of the F.C.C. 's Rules and Regulations.

Secondary Carrier

The Local Exchange Carrier that owns the facilities subtending the facilities of the primary carrier which interfaces with the Interexchange Carrier.

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Service Access Code

The term "Service Access Code" denotes a 3 digit code in the NPA format which is used as the first three digits of a 10 digit address and which is assigned for special network uses. Whereas NPA codes are normally used for identifying specific geographical areas, certain Service Access Codes have been allocated in the North American Numbering Plan to identify generic services or to provide access capability. Examples of Service Access Codes include the 800 and 900 codes.

Service Switching Point (SSP)

The term "Service Switching Point" denotes an end office or tandem which, in addition to having SS7 and SP capabilities, is also equipped to query centralized data base.

Serving: Wire Center

The term "Serving Wire Center" denotes the wire center from which the customer designated premises would normally obtain dial tone from the Telephone Company.

Seven Digit Manual Test Line

The term "Seven Digit Manual Test Line" denotes an arrangement which allows the Customer to select balance, milliwatt and synchronous test lines by manually dialing a seven digit number over the associated access connection.

Shortage of Facilities or Equipment

The term "Shortage of Facilities or Equipment" denotes a condition which occurs when the Telephone Company does not have appropriate cable, switching capacity, bridging or, multiplexing equipment, etc., necessary to provide the Access Service requested by the customer.

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Short Circuit Test Line

The term "Short Circuit Test Line" denotes an arrangement in an end office which provides for an ac short circuit termination of a trunk or line by means of a capacitor of at least four microfarad.

Signaling Point (SP)

The term "Signaling Point (SP)" denotes an SS7 network interface element capable of originating and terminating SS7 trunk signaling messages.

Signaling Point of Interface (SPOI)

The term "Signaling Point of Interface (SPOI)" denotes the customer designated location where the SS7 signaling information is exchanged between the Telephone Company and the customer.

Signaling Svstem 7 (SS7)

The term "Signaling System 7 (SS7)" denotes the layered protocol used for standardized common channel signaling in the United States and Puerto Rico.

Signal Transfer Point (STP)

The term "Signal Transfer Point (STP)" denotes a packet switch which provides access to the Telephone Company's SS7 network and performs SS7 message signal routing and screening.

Signal Transfer Point (STP) Port

The term "Signal Transfer Point (STP) Port" denotes the point of termination and interconnection to the STP.

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Subtending: End Office of an Access Tandem

The term "Subtending End Office of an Access Tandem" denotes an end office that has final trunk group routing through that tandem.

Subject to Availability of Equipment

The term "Subject to Availability of Equipment" means the equipment in question is installed, in operating condition, and has the required capacity available in the end office of the Telephone Company.

Super Intermediate Hub

The term "Super Intermediate Hub" denotes a wire center at which bridging or multiplexing functions are performed for customers served by all wire centers in the LATA. A Super Intermediate Hub can be restricted to one or more designated NPAs within a LATA and/or to wire centers that are owned by the same telephone company as the hub. Super Intermediate Hubs and the wire centers they serve are identified in National Exchange Carrier Association, Inc. Tariff F.C .C. No. 4.

Synchronous Test Line

The term "Synchronous Test Line" denotes an arrangement in an end office which performs marginal operational tests of supervisory and ring-tripping functions.

Tandem Switched Transport

The term "Tandem Switched Transport" denotes transport from the serving wire center to the end office, or from the tandem to the end office, that is switched at a tandem.

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Terminating Direction

The term "Terminating Direction" denotes the use of Access Service for the completion of calls from an IC premises to an End User Premises.

Terminus Hub

The term "Terminus Hub" denotes a wire center at which bridging or multiplexing functions are performed only for customers served directly by the same wire center.

Transmission Measuring (105 Type) Test Line/Responder

The term "Transmission Measuring (105 Type) Test Line/Responder" denotes an arrangement in an end office which provides far-end access to a responder and permits two-way loss and noise measurements to be made on trunks from a near end office.

Transmission Path

The term "Transmission Path" denotes an electrical path capable of transmitting signals within the range of the service offering, e.g., a voice grade transmission path is capable of transmitting voice frequencies within the approximate range of 300 to 3000 HZ. A transmission path is comprised of physical or derived facilities consisting of any form or configuration of plant typically used in the telecommunications industry.

Trunk

The term "Trunk" denotes a communications path connecting two switching systems in a network, used in the establishment of an end-to-end connection.

ACCESS SERVICE

2. General Regulations

Trunk Group

The term "Trunk Group" denotes a set of trunks which are traffic engineered as a unit for the establishment of connections between switching systems in which all of the communications paths are interchangeable.

Trunk Side Connection

The term "Trunk Side Connection" denotes the connection of a transmission path to the trunk side of a local exchange switching system.

Two-Wire to Four-Wire Conversion

The term "Two-Wire to Four-Wire Conversion" denotes an arrangement which converts a four-wire transmission path to a two-wire transmission path to allow a four-wire facility to terminate in a two-wire entity (e.g., a central office switch).

Uniform Service Order Code

The term "Uniform Service Order Code" denotes a three or five character alphabetic, numeric, or an alphanumeric code that identifies a specific item or service or equipment. Uniform Service Order Codes are used in the Telephone Company billing system to generate recurring rates and nonrecurring charges.

V and H Coordinates Method

The term "V and H Coordinates Method" denotes a method of computing airline miles between two points by utilizing an established formula which is based on the vertical and horizontal coordinates of the two points.

ACCESS SERVICE

2. General Regulations

WATS Access Line

The term "WATS Access Line" denotes the dedicated access line between a customer designated premises and the serving wire center of that premise. For OUTWATS the originating end of the service which uses a WATS Access Line is referred to as the closed end. For INWATS the terminating end of the service is referred to as the closed end.

WATS Access Service

The term "WATS Access Service" denotes the switched function provided at the WATS screening office for INWATS and OUTWATS services.

Wire Center

The term "Wire Center" denotes a building in which one or more central offices, used for the provision of Telephone Exchange Services, are located.

ACCESS SERVICE

3. Carrier Common Line Access Service

3.1 General Description

Carrier Common Line Access provides for the use of Telephone Company common lines by customers for access to end users to furnish Intrastate Communications.

Carrier Common Line Access is provided where the customer obtains Telephone Company Switched Access Service under this tariff.

In addition, a Special Access Surcharge as set forth in 12.2D. following will apply to intrastate special access service provided by the Telephone Company to a customer, in accordance with regulations as set forth in 7.3.3 following.

3.2 Limitations

(A) A telephone number is not provided with Carrier Common Line Access.

(B) Detail billing is not provided for Carrier Common Line Access.

(C) Directory listings are not included in the rates and charges for Carrier Common Line Access.

(D) Intercept arrangements are not included in the rates and charges for Carrier Common Line Access.

(E) All trunk side connections provided in the same combined access group will be limited to the same features and operating characteristics.

(F) Where WATS Access Service is provided which terminates at a WATS Service Office, minutes which are carried on that service (i.e., originating minutes for outward WATS and terminating minutes for inward WATS) shall not be assessed Carrier Common Line Access per minute charges.

ACCESS SERVICE

3. Carrier Common Line Access Service

3.3 Undertaking of the Telephone Company

(A) Where the customer is provided with Switched Access Service under other sections of this tariff, the Telephone Company will provide the use of Telephone Company common lines by a customer for access to end users at rates and charges as set forth in 12.1 .A following.

(B) The Switched Access Service provided by the Telephone Company includes the Switched Access Service provided for both interstate and intrastate communications and the Carrier Common Line Access rates and charges as set forth in 12.1 .A following apply in accordance with the regulations as set forth in 3.7(E) following.

(C) When the customer is provided Operator Trunk-Coin or Combined Coin and Non-Coin Operator Trunk-Full Feature Optional Features for sent-paid pay telephone access, the Telephone Company will collect sent-paid monies from pay telephone stations and will remit monies to the customer as set forth in 3.6 following. The Telephone Company will provide message call detail format and bill periods used to determine the monies upon request from the customer.

ACCESS SERVICE

3. Carrier Common Line Access Service

3.4 Obligations of the Customer

(A) The Switched Access Service associated with Carrier Common Line Access shall be ordered by the customer under other sections of this tariff.

(B) The customer facilities at the premises of the ordering customer shall provide the necessary on-hook and off-hook supervision.

(C) All Switched Access Service provided to the customer will be subject to Carrier Common Line Access charges.

(D) When a customer reports interstate and intrastate use of Switched Access Service, the associated Carrier Common Line Access used by the customer for intrastate will be determined as set forth in 3.7(E) following.

(E) Where Feature Group C or D end office switching is provided without Telephone Company recording and the customer records minutes of use which will be used to determine Carrier Common Line Access charges (i.e., Feature Group C or D operator and TSPS calls such as pay telephone sent-paid, operator-DDD, operator-person, collect, credit-card, third number and/or other like calls), the customer shall furnish such minutes of use detail to the Telephone Company in a timely manner. If the customer does not furnish the data to the Telephone Company, the customer shall identify all Switched Access Services which could carry such calls in order for the Telephone Company to accumulate the minutes of use through the use of special Telephone Company measuring and recording equipment.

ACCESS SERVICE

3. Carrier Common Line Access Service

3.5 Payment Arrangements

Payment arrangements are set forth in Section 2.4.1 preceding.

3.6 Rate Regulations

(A) The Common Line Charges will be billed to each Switched Access Service provided under this tariff in accordance with the regulation as set forth in (E) following except as set forth in (D) following.

(B) When access minutes are used to determine the Common Line Charges, they will be accumulated using call detail recorded by Telephone Company equipment except as set forth in (C) following the Feature Group C or D operator and TSPS call detail such as pay telephone sent-paid, operator-DDD, operator-person, collect, credit-card, third number and/or other like calls recorded by the customer. The Telephone Company measuring and recording equipment except as set forth in (C) following will be associated with end office or local tandem switching equipment and will record each originating and terminating access minute where answer supervision is received. The accumulated access minutes will be summed on a line by line-basis, by line group or by end office, whichever type of account is used by the Telephone Company, for each customer and then rounded to the nearest minute.

(C) When Carrier Common Line Access is provided in association with Feature Group A or Feature Group B Switched Access Service in Telephone Company offices that are not equipped for measurement capabilities, an assumed average intrastate access minutes will be used to determine the Common Line Access Rates. These assumed access minutes will be determined by the primary carrier or tandem provider.

(D) When a customer reports interstate and intrastate use of in-service Switched Access Service, the Carrier Common Line Access Common Line Charges

ACCESS SERVICE

3. Carrier Common Line Access Service

will be billed only to intrastate Switched Access Service access minutes based on the data reported by the customer as set forth in 2.3.10 preceding. The intrastate Switched Access Service access minutes will, when necessary, be used to determine the Carrier Common Line Charges as set forth in (E) following.

(E) The charges for the involved customer account will be determined as follows:

(1) The access minutes for a Feature Group B when utilized for the provision of MTS/WATS service and Feature Group C and D Switched Access Service will be multiplied by the Common Line - Access Rate per minute as set for the in 12.1.A following to determine the charges.

(2) The access minutes for a Feature Group A or B Switched Access Service originating from or terminating at an end office or access tandem will be multiplied by the Common Line Access Rate per minute as set forth in 12.1 .A following to determine the charges.

(3) The terminating Access Rate per minute applies to all terminating access minutes of use, plus all originating access minutes of use associated with calls placed to 800 numbers.

(4) The originating Access Rate per minute applies to all originating access minutes of use, less those originating access minutes of use associated with calls placed to 800 numbers.

ACCESS SERVICE

4. 800 Data Base Access Service

4.1 General Description

800 Data Base Access Service is a query function to identify the customer to whom an 800 call will be delivered. When a 1+800 +NXX-XXXX call is originated by an end user, the Telephone Company will query an 800 data base to perform the identification function. The call will then be routed to the identified customer.

4.2 Undertaking of the Telephone Comnanv

The manner in which 800 data base access service is provided is dependent on the availability of SS7 service at the end office from which the service is provided as outlined following:

When 800 data base access service originates at an end office equipped with Service Switching Point (SSP) capability for querying centralized data bases or at a non-SSP equipped end office that can accommodate direct trunking of originating 800 calls, all such service will be provisioned from that end office.

When 800 data base access service originates at an end office not equipped with SSP customer identification capability, the 800 call will be delivered to the access tandem on which the end office is homed and which is equipped with the SSP feature to query centralized data bases.

4.3 Limitations

A. 800 Data Base Access Service is only provided with FGC or FGD switched access service.

ACCESS SERVICE

4. 800 Data Base Access Service

B. If the translated POTS number is delivered, the customer must request the POTS translation vertical feature.

C. All traffic originating from end offices not equipped to provide SS7 signalling and routing or not able to accommodate direct trunking of originating 800 calls require routing via an access tandem where SSP functionality is available.

4.4 Obligations of the Customer and Payment Arrangements

Obligations of the customer and payment arrangements are set forth in section 2 of this tariff, General Regulations.

4.5 Rate Regulations

A Basic or Vertical Feature Query charge, as set forth in 12.3 following, is assessed for each query launched to the data base which identifies the customer to whom the call will be delivered. Query charges are in addition to those charges applicable for the Feature Group C or Feature Group D switched access service.

A. Basic Query

The Basic Query provides the identification of the customer to whom the call will be delivered and includes area of service routing which allows routing of 800 calls by telephone companies to different interexchange carriers based on the Local Access Transport Area (LATA) in which the call originates.

ACCESS SERVICE

4. 800 Data Base Access Service

B. Vertical Feature Query

The Vertical Feature Query provides the same customer identification as the basic query and vertical features which may include:

1. Call validation, (ensuring that calls originate from subscribed service areas).

2. POTS translation of 800 numbers.

3. Alternate POTS translation (which allows subscribers to vary the routing of 800 calls based on factors such as time of day, place or origination of the call).

4. Multiple carrier routing (which allows subscribers to route to different carriers based on factors similar to those in 3, above).

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

5.1 General

This section sets forth the regulations and order related charges for Access Orders for Switched Access, Special Access, and Public Packet Data Network or Access related Service or to provide changes to existing services. These charges are in addition to other applicable charges as set forth in other sections of this tariff.

An Access Order is an order to provide the customer with Switched Access Service or Special Access Service or to provide changes to existing services.

5.1.1 Ordering Conditions

A customer may order any number of services of the same type and between the same premises on a single Access Order. All details for services for a particular order must be identical.

The customer shall provide all information necessary for the Telephone Company to provide and bill for the requested service. In addition to the order information required in 5.2 following, the customer must also provide:

Customer name and premises address(es)
Billing name and address (when different from customer name and address).
Customer contact name(s) and telephone number(s) for the following provisioning activities: order negotiation, order confirmation, interactive design, installation and billing.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

5.1.2 Provision of Other Services

Other services as described in 9.1 and 9.2 may be ordered in conjunction with the order for Access Service. All rates and charges set forth in 12.4 will apply in addition to the rates and charges for the Access Service with which they are associated.

5.2 Access Order

An Access Order is used by the Telephone Company to provide a customer Access Service as follows:

Switched Access Services as set forth in 6. following, and
Special Access Services as set forth in 7. following,

When placing an order for Access Service, the customer shall provide, at a minimum, the following information:

For Feature Group C and D Switched Access Service, the customer shall specify the number of busy hour minutes of capacity (BHMC) from the customer's premises to the end office by Feature Group and by type of BHMC. This information is used to determine the number of transmission paths as set forth in 6.4.5 following. The customer then specifies the Local Transport and Local Switching options.

For all Special Access Services, the customer must specify the customer designated premises, the type of service e.g.,/Voice Grade, the channel interface, technical specification package and options desired. The closed end of a WATS Access Line is Special Access Service.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

For each Access Order a service order charge will be assessed at the rate set forth in 12.5(A) following.

The BHMC may be determined by the customer in the following manner. For each day (8 am to 11 pm, Monday through Friday, excluding national holidays), the customer shall determine the highest number of minutes of use for a single hour (e.g., 55 minutes in the 10-11 busy hour). The customer shall, for the same hour period (i.e., busy hour) for each of twenty consecutive business days, pick the twenty consecutive business days in a calendar year which add up to the largest number of minutes of use. Both originating and terminating minutes shall be included. The customer shall then determine the average busy hour minutes of capacity (i.e., BHMC) by dividing the largest number of minutes of use figure for the same hour period for the consecutive twenty business day period by 20. This computation shall be performed for each end office the customer wishes to serve. These determinations thus establish the forecasted BHMC for each end office.

Where the Special Access Service is exempt from the Special Access Surcharge, as set forth in Section 7.3.3 following, the customer shall furnish with the order the certification as set forth in Section 7.3.3 following.

5.2.1 Access Order Service Date Provision

Access Service will be installed during Telephone Company business days. If a customer requests that installation be done outside of schedule work hours, and the Telephone Company agrees to this request, the customer will be subject to applicable Additional Labor charges as set forth in 9.2 following.

Access Service will be installed during Standard Telephone Company business days.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

5.2.2 Access Order Modifications

The customer may request a modification of its Access Order prior to the service date. The Telephone Company will make every effort to accommodate a requested modification when it is able to do so with the normal work force assigned to complete such an order within normal business hours. If the modification cannot be made with the normal work force during normal business hours, the Telephone Company will notify the customer. If the customer still desires the Access Order modification, the Telephone Company will schedule a new service date.

Any increase in the number of Special Access channels or Switched Access Service busy hour minutes of capacity will be treated as a new Access Order (for the increased amount only).

If order modifications are necessary to satisfy the transmission performance for a Special Access ordered by a customer, these changes will be made without charges being incurred by the customer.

(A) Service Date Change

Access Order Service dates may be changed, but the new service date may not exceed the original service date by more than 30 calendar days. If the customer requested service date is more than 30 calendar days after the original service date, the order will be canceled by the Telephone Company and reissued. If the Telephone Company determines it can accommodate the customer's request without delaying service dates for orders of other customers, a new service date may be established. An order change charge as set forth in 12.5 following will apply to all service date changes of 30 days or less.

ACCESS SERVICE

5. Ordering: Options for Switched and Special Access Service

(B) Partial Cancellation Charge

Any decrease in the number of ordered Special Access Service channels or Switched Access Service busy hour minutes of capacity will be treated as a partial cancellation and the order change charges as set forth in 12.5 following will apply.

(C) Design Change

The customer may request a design change to the service ordered. A design change is any change to an Access Order which requires engineering review, An engineering review is a review by Telephone Company personnel of the service ordered and the requested changes to determine what changes in the design, if any, are necessary to meet the changes requested by the customer. Design changes include such things as the addition or deletion of optional features or functions, type of channel interface, type of Interface Group or technical specification package. Design changes do not include a change of customer premises, end user premises, end office switch or Special Access Service channel type. Changes of this nature will require the issuance of a new order and the cancellation of the original order with appropriate cancellation charges applied. The Telephone Company will review the requested change, notify the customer whether the change is a design change, if it can be accommodated and if a new service date is required. Charges for design changes are set forth in order change charges in 12.5 following.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

5.2.3 Cancellation of an Access Order

(A) A customer may cancel an Access Order for the installation of service on any date prior to the service date. The cancellation date is the date the Telephone Company receives written or verbal notice from the customer that the order is to be canceled. The verbal notice must be followed by a written confirmation within 10 days.

If a customer or a customer's end user is unable to accept Access Service within 30 calendar days after the original service date, the customer has the choice of the following options:

The Access Order shall be canceled and charges set forth in (B) following will apply, or

Billing for the service will commence.

In such instances, the cancellation date or the billing date, depending on which option is selected by the customer, shall be on the 30st day beyond the original service date of the Access Order.

(B) When a customer cancels an Access Order for the installation of service, a Cancellation Charge will apply as follows:

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

(1) Installation of Switched or Special Access Service facilities is considered to have started when the Telephone Company incurs any cost in connection therewith or in preparation thereof which would no otherwise have been incurred.

(2) Where the customer cancels an Access Order prior to the start of installation of access facilities, no charges shall apply.

(3) Where installation of access facilities has been started prior to the cancellation, the charges specified in (a) or (b) following, whichever is lower, shall apply.

(a) A charge equal to the costs incurred in such installation, less estimated net salvage. Such charge is determined as detailed in (4) following.

(b) The charge for the minimum period of Switched or Special Access Service ordered by the customer.

(4) Charges applicable as specified in (3)(A) preceding include the nonrecoverable cost of equipment and material ordered, provided or used, plus the nonrecoverable cost of installation and removal including the costs of engineering, labor, supervision, transportation, rights-of-way and other associated costs.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

(C) When a customer cancels an order for the discontinuance of service, no charges apply for the cancellation.

(D) If the Telephone Company misses a service date by more than 30 days due to circumstances over which it has direct control (excluding, e.g., acts of God, governmental requirements, work stoppages and civil commotions), the customer may cancel the Access Order without incurring cancellation charges.

5.2.4 Minimum Period

(A) The minimum period for which Access Service is provided and for which charges are applicable, is one month.

5.2.5 Ordering of Access Services Where More Than One Exchange Telephone Company is Involved

Each Telephone Company will provide its portion of the Access Service within its operating territory to an interconnection point (IP) with the connecting carrier. The interconnection point and billing percentage (BP) will be determined by the Telephone Companies involved in providing the Access Service and listed in Exchange Carrier Association Tariff F.C.C. No. 2. Each Telephone Company will bill the customer for its portion of the service as set forth in 2.4.7. All other appropriate charges in each Telephone Company tariff are applicable.

ACCESS SERVICE

5. Ordering Options for Switched and Special Access Service

(A) For Feature Group A and B Switched Access Services, the customer must place an order with the Telephone Company in whose territory the first point of switching is located, (i.e., FGA - dial tone office, FGB - access tandem or end office) and provide a copy of the order to the secondary carrier.

(B) When WATS Access Service is ordered the Telephone Company is whose territory the end office is located must receive the order from the customer. In addition, the Telephone Company in whose territory the WATS screening office is located must also receive a copy of the order from the customer.

(C) For Special Access Service without the use of a hub, the customer will place the order with the Telephone Company in whose territory the customer designated premises is located.

(D) For Special Access Services with a hub, the customer will place the order with the Telephone Company in whose territory the hub is located.

For the service(s) ordered as set forth preceding, the customer must also supply a copy of the order to the Telephone Company in whose operating territory a customer designated premises is located.

6. Switched Access Service

6.1 General

Switched Access Service, which is available to customers for their use in furnishing their services to end users, provides a two point electrical communications path between a customer designated premises and end user's premises. It provides for the use of common terminating, switching and trunking facilities and for the use of common subscriber plant of the Telephone Company. Switched Access Service provides for the ability to originate calls from an end user's premises to a customer's premises, and to terminate calls from a customer's premises to an end user's premises in the exchange where it is provided. It is available at each end office served by the Telephone Company.

In the Telephone Company's exchange(s) the customer's premises are not located in the serving area of the Telephone Company. It is necessary for the customer to order Switched Access Service from the primary carrier and Telephone Company in the case of Feature Group C and D. In the case of Feature Group A, provided through (EAS) Extended Area Service and Feature Group B provided via an access tandem of the primary carrier, it is necessary for the customer to provide a copy of the order to the Telephone Company.

6.1.1 Feature Group Arrangements

Switched Access Service is provided in four service categories called Feature Groups. These are differentiated by the manner in which an end user can access them in originating calling, e.g., with or without an access code. Following is a brief description of each feature group arrangement.

(A) Feature Group A

FGA Access in the originating direction is available to the FGA customer's end users via the EAS facilities of the primary carrier. FGA Access in the terminating direction is available to all customers. Terminating FGA Access is provided via an access tandem or an end office of the primary carrier to the end users in the EAS service area. A more detailed description of FGA Access is provided in 6.2.1 following.

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6. Switched Access Service

(B) Feature Group B (FGB)

FGB Access is available to all customers. FGB Access provides trunk side access to Telephone Company end office switches, via an access tandem of the primary carrier, with an associated uniform 950-10XX access code for the customer to use in originating communications from and terminating communications to an Interexchange Carrier's Service or a customer provided communications capability. A more detailed description of FGB Access is provided in 6.2.2 following.

(C) Feature Group C (FGC)

FGC Access provides trunk side access to Telephone Company end office switches, via an access tandem of the primary carrier for providers of MTS and WATS used in originating and terminating communications. Feature Group C is only available to providers of MTS and WATS. WATS Access Service is available as set forth in 7.1.2 following. A more detailed description of FGC Access is provided in 6.2.3 following.

(D) Feature Group D (FGD)

FGD access, which is available to all customers, provides trunk side access to Telephone Company end office switches, through the use of end office or access tandem switch trunk equipment. Feature Group D is available to providers of MTS and WATS. Special Access Services utilized for connection with FGD at Telephone Company designated WATS serving offices as set forth in Section 7 following may be ordered separately by a customer other than the customer which orders the FGD Switched Access Service for the provision of WATS or WATS-type services. A more detailed description of FGD Access is provided on 6.2.4 following.

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6. Switched Access Service

(E) Manner of Provision

FGC Access is furnished on BHMC basis. BHMCs are differentiated by type and directionality of traffic carried over a Switched Access Service arrangement. Differentiation of traffic among BHMC types is necessary for the Telephone Company to properly design Switched Access Service to meet the traffic carrying capacity requirement of the customer.

There are two major BHMC categories identified as: Originating and Terminating. Originating BHMCs represent access capacity within a LATA for carrying traffic from the end user to the customer; and Terminating BHMCs represent access capacity within a LATA for carrying traffic from the customer to the end user. When ordering capacity for FGC and FGD Access the customer must at a minimum specify such access capacity in terms of originating BHMCs and/or terminating BHMCs.

6.1.2 WATS Access Service

WATS Access Service is a type of Special Access Service that is provided only for use with Feature Group C and Feature Group D Switched Access Service. WATS Access Service connects a customer designated premises with a WATS Serving Office, utilizing the rate categories described in 7.1.2 following.

6.1.3 Rate Categories

There are three rate categories which apply to Switched Access Service:

Local Transport
End Office (i.e., Local Switching, Line Termination, Intercept Directory Assistance Surcharge)
Common Line (described in Section 3 preceding)

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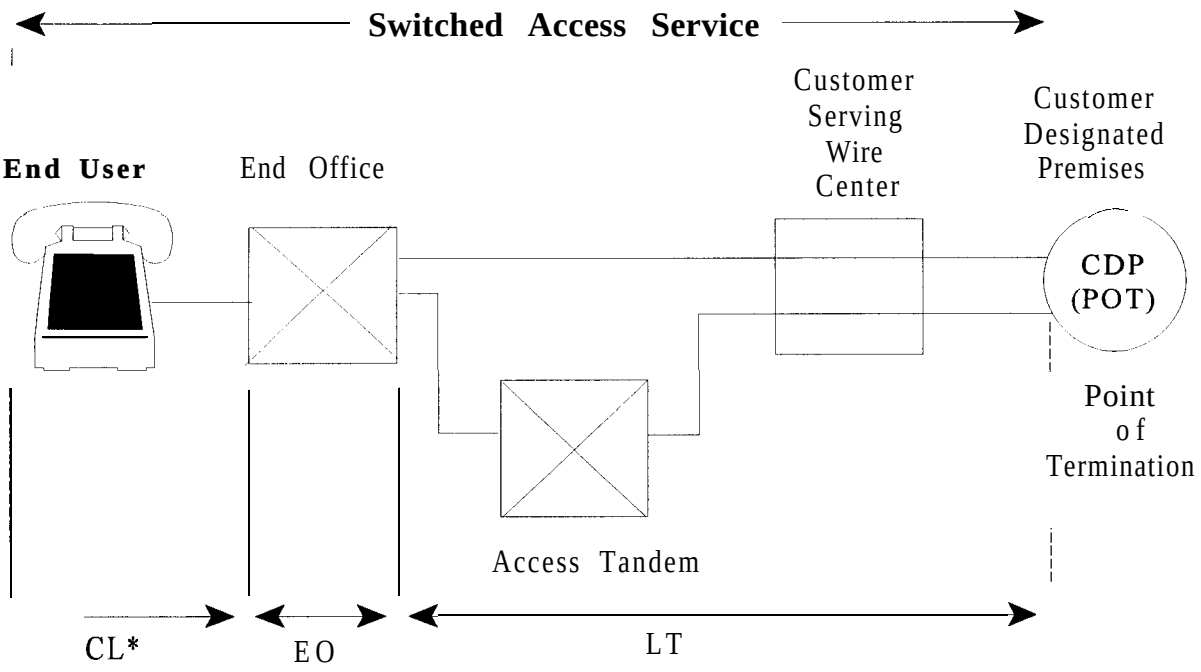
ACCESS SERVICE

6. Switched Access Service

The following diagram depicts a generic view of the components of Switched Access Service and the manner in which the components are combined to provide a complete Access Service.



LT -Local Transport
EO -End Office
CL -Common Line

* Common Line Access Service is provided under Section 3 preceding.

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6. Switched Access Service

(A) Local Transport

The Local Transport rate category provides the transmission and tandem switching facilities between the customer's premises and the end office switch(es) where the customer's traffic is switched to originate or terminate its communications. The Telephone Company will measure and apply its per access minute rates to the local transport termination, at the end office and its per access minute mile rates to the Local Transport facilities from the end office to the Interconnection Point. Local Transport is provided at the rates set forth in 12.1.C following and in accordance with 2.4.7 preceding.

Local Transport is a two-way frequency transmission path composed of facilities determined by the Telephone Company. The two-way voice frequency transmission path permits the transport of calls in the originating direction (from the end user end office switch to the customer premises location) and in the terminating direction (from the customer premises location to the end user end office switch), but not simultaneously. The voice frequency transmission path may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth or approximately 300 to 3000 Hz.

The Telephone Company will work cooperatively with the customer to develop routing and other local transport arrangements subject to availability of equipment or in accordance with section 10 following.

The Telephone Company will work cooperatively with the primary carrier to provide the interface groups and optional features the customer has ordered subject to availability of equipment or in accordance with section 10 following.

The number of Local Transport transmission paths provided is based on the customer's order and is determined by the Telephone Company as set forth in 6.4.5 following.

6. Switched Access Service

(B) End Office

The End Office rate category provides the local end office switching and end user termination functions to complete the transmission of Switched Access communications to and from the end users served by the local end office. The End Office rate category includes the Local Switching, Line Termination, Intercept and Directory Assistance Surcharges.

(1) Local Switching

The Local Switching rate element provides for: (1) the local end office switching functions; (2) the transport termination for the trunk side arrangements which terminates the Local Transport facilities; (3) the end user termination which terminates the end user facilities; (4) the intercept function which provides for the termination of a call at an intercept operator or recording to inform the caller why a call, as dialed, could not be completed, and if possible provide the correct number; and (5) the toll recording function which records the details of a customer message. The Local Switching rate is applied to each access minute used. Rates for Local Switching are as set forth in 12.1 .B(1) following. The number of Transport Terminations provided will be determined by the Telephone Company as set forth in 6.4.6 following.

(2) Director-v Assistance Surcharge

The Directory Assistance Surcharge rate element provides for the cost of making available customer names and telephone numbers to directory assistance operators. Directory Assistance Surcharge rates are applied to the total number of access minutes. Directory Assistance surcharge rates are as set forth in 12.1 .B(4) following.

The number of end office switching transmission paths provided will be determined by the Telephone Company based on the BHMC's to each end office specified by the customer in its order. The number of transmission paths will be determined as set forth in 6.4.5 following.

6. Switched Access Service

6.1.4 Design Layout Report

The Telephone Company or the primary carrier will provide to the customer the makeup of the facilities and services provided to the first point of switching. This information will be provided in the form of a Design Layout Report. The Design Layout Report will be provided to the customer at no charge and will be reissued whenever facilities provided to the customer are materially changed.

6.1.5 Acceptance Testing

At no additional charge, the Telephone Company will, at the customer's request, cooperatively test, at the time of installation, the following parameters; loss, C-message noise, 3-tone, dc continuity and operational signaling.

6.1.6 Ordering Options and Conditions

Switched Access Service is ordered under the Access Order provisions set forth in 5 preceding. Also, included in that section are charges which may be associated with ordering Switched Access Service (e.g., Access Order charges, Order Change Charges, Cancellation Charges, etc.)

6.1.7 Testing

(A) Acceptance Testing

At no additional charge, the Telephone Company will, in conjunction with the primary carrier, at the customers request, subject to the availability of equipment, cooperatively test, at the time of installation, the following parameters: loss, C-notched noise, C-message noise, 3-tone slope, d.c. continuity and operational signaling. When the Local Transport is provided with Interface Groups 2 through 10, and the Transport Termination is two-wire (i.e., there is a four-wire to two-wire conversion in Local Transport), balance parameters (equal level echo path loss) may also be tested.

(B) Routine Testing

At no additional charge, the Telephone Company will in conjunction

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with the primary carrier, at the customer's request, subject to the availability of equipment, test after installation on an automatic or manual basis, 1004 Hz loss, C-message noise and Balance (Return loss).

In the case of automatic testing, the customer shall provide remote office test lines and 105 test lines with associated responders or their functional equivalent. The frequency of these tests will be that which is mutually agreed upon by the customer and the Telephone Company, but shall consist of not less than quarterly 1004 Hz Loss and C-message noise test and an annual Balance test. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on an as-occurs basis.

Additional tests may be ordered as set forth in 9.2 following. Charges for these additional tests are set forth in 12.4(B) following.

6.2 Provision and Description of Switched Access Service Feature Groups

Switched Access is provided in four different Feature Group arrangements. The company provides type B, C, or D transmission performance to the Interconnection point with the primary carrier. The provision of Feature Groups require Local Transport facilities and the appropriate End Office functions. The parameters for the transmission performances are as set forth in 6.3 following.

Feature Groups are arranged for either originating, terminating or two-way calling, based on the customer end office switching capacity ordered. Originating calling permits the delivery of calls from telephone exchange service locations to the customer's premises. Terminating calling permits the delivery of calls from the customer's premises to telephone exchange services locations. Two-way calling permits the delivery of calls in both directions, but not simultaneously. The customer must work with the Primary Carrier to determine the type of calling to be provided.

There are various chargeable and nonchargeable optional features available with the Feature Groups through the tariff of the Primary Carrier. The telephone company will work cooperatively with the primary carrier to provide the features ordered by the customer subject to availability of equipment. Where equipment is not available and the customer requests such features from the Telephone Company, they must be ordered through Section 10 of this tariff.

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Following are detailed descriptions of Feature Groups provided by the Telephone Company. Feature Groups are described in terms of their specific physical characteristics and calling patterns, the transmission performances with which it is provided, and the standard testing capabilities provided by the Telephone Company.

6.2.1 Feature Group A (FGA)

(A) Description

(1) Originating FGA is provided via the EAS facilities of the primary carrier at electronic and electromechanical end offices of the Telephone Company.

(2) Terminating FGA is provided in connection with Telephone Company electronic and electromechanical end offices via the access tandem or the end office of the primary carrier for terminating calling only.

(3) A seven digit local telephone number assigned by the primary carrier is provided for access to FGA switching in the originating direction. The seven digit local telephone number will be associated with the selected end office switch and is of the form NXX-XXXX.

(4) FGA Switching, when used in the terminating direction, is arranged with dial tone start-dial signaling. When used in the terminating direction FGA switching may, at the option of the customer, be arranged for dial pulse of dual tone multifrequency address signaling, subject to availability of equipment at the first point of switching.

(5) No address signaling is provided when FGA Switching is used in the originating direction. Address signaling in such cases, if required by the customer, must be provided by the customer's end user using inband tone signaling techniques. Such inband tone address signals will not be regenerated by the Telephone Company and will be subject to the ordinary transmission capabilities of the Local Transport provided.

(6) FGA switching, when used in the terminating direction, may

be used to access valid NXXs in the local calling area, emergency reporting service (9 11 where available), exchange telephone repair (611 where available), time or weather announcement services of the Telephone Company, community information services of an information service provider, and other customer's services (by dialing the appropriate digits). Charges for FGA terminating calls to 611 or 911 will only apply where sufficient call details are available.

(B) Testing Capabilities

FGA is provided, in the terminating direction where equipment is available, with seven digit access lines to balance (100 type) test line and milliwatt (102 type) test line. Additional Testing and is available as set forth in 9.2 following.

6.2.2 Feature Group B (FGB)

(A) Description

(1) FGB is provided at electronic and electromechanical end office switches of the Telephone Company via the designated electronic access tandem switches of the primary carrier.

(2) FGB switching is provided with multifrequency address signaling in both the originating and terminating directions.

The provisions of FGB at the access tandem is made through the access tariff of the primary carrier.

(3) The access code for FGB switching is a uniform access code. The form of the uniform access code is 950-10XX for carriers. The uniform access code will be assigned to the customer by the primary carrier.

(4) FGB switching, when used in the terminating direction, may be used to access valid NXXs in the local calling area, time or weather announcement services of an information service provider and other customer's serviced (by dialing the

appropriate digits). Additionally, non-access charges will also be billed for calls from a FGB trunk to another customer's service in accordance with that customer's applicable service rates when the Telephone Company performs the billing function for that customer. Calls in the terminating direction will not be completed to 950-10XX access codes, local operator assistance (0- and 0 +). Directory Assistance (411 and 555-1212), service codes 611 and 911 or 10XXX access codes. FGB may not be switched, in terminating direction, to Switched Access Service Feature Groups B, C or D.

(5) The Telephone Company will provide a communication path from the end office switches to the interconnection point with the primary carrier.

(B) Transmission Specifications

FGB is provided with Type B or C transmission specifications to Interconnection Points with the primary carrier.

(C) Testing Capabilities

FGB is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line, milliwatt (102 type) test line, nonsynchronous or synchronous test line, Additional Testing, is available as set forth in 9.2 following.

6.2.3 Feature Group C

(A) Description

(1) FGC is provided at all Telephone Company end office switches via Telephone Company designated access tandem switches. FGC switching is provided to the customer (i.e., providers of MTS and WATS Access Service) at an end office switch.

(2) FGC is provided as trunk side switching through the use of the access tandem switch of the primary carrier. The switch trunk equipment is provided with answer and disconnect

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supervisory signaling. Wink start-pulsing signals are provided in all offices where available. In those offices where wink-start signals are not available, delay dial start-pulsing signals will be provided, in which case no start-pulsing signals are provided.

(3) FGC is provided with multifrequency address signaling. The address signaling will be dial pulse, revertive pulse, immediate dial pulse or panel call indicator signaling, whichever is available. Up to 12 digits of the called party number dialed by the customer's end user using dual tone multifrequency or dial pulse address signals will be provided by Telephone Company equipment to the Customer Premises where the Switched Access Service Terminates. Such called party number signals will be subject to the ordinary transmission capabilities of Local Transport provided.

(4) No access code is required for FGC Switching. The telephone number dialed by the customer's end user shall be a seven or ten digit number for calls in the North American Numbering Plan (NANP). For international calls outside the NANP, a seven to twelve digit number may be dialed. The form of the numbers dialed by the customer's end user is NXX-XXXX. 0 or 1 + NXX-XXXX, NPA + NXX-XXXX, 0 or 1 + NPA + NXX-XXXX, and, when the end office is equipped for International Direct Dialing (IDDD), 01 + CC + NN or 011 + CC + NN.

(5) FGC Switching, when used in the terminating direction may be used to access valid NXXs in the local exchange area, time or weather announcement services of the Telephone Company, community information services of an information provider, and the customer's services (by dialing the appropriate codes) when the services can be reached using valid NXX codes. FGC may not be switched, in the terminating direction, to Switched Access Service Feature Group C, or D.

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(B) Transmission Specifications

FGC is provided with either Type B or C Transmission Specifications when routed to an access tandem.

Transmission Specifications between the Primary exchange carrier and the customer are provided in the tariff of the primary exchange carrier.

DB Data Transmission Parameters are provided for the transmission path between the access tandem and the end office.

(C) Testing Capabilities

FGC is provided, in the terminating direction where equipment is available, with seven digit access to balance (100 type) test line, milliwatt (102 type) test line, nonsynchronous and synchronous test line. In addition to the tests described in 6.1.7 preceding which are included with the installation of service and ongoing routine testing. Additional Testing is available as set forth in 9.2 following.

6.2.4 Feature Group D

(A) Description

(1) FGD Access, which is available to all customers, provides trunk sided access to Telephone Company end office switches. Special Access Services utilized for connection with FGD at Telephone Company designated WATS Serving offices as set forth in Section 7. following may be ordered separately by a customer other than the customer which orders the FGD Switched Access Service for the provision of WATS or WATS-type services. Special Access Services are ordered as set forth in 5.2 preceding.

(2) FGD is provided at Telephone Company designated end office switches whether routed directly or via Telephone Company designated electronic access tandem switches. The Telephone Company will designate the first point(s) of switching for FGD services where the Telephone Company elects to provide equal access through a centralized equal access arrangement. Those Telephone Company offices providing equal access through

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centralized arrangements are identified in NATIONAL EXCHANGE CARRIER ASSOCIATION, INC., TARIFF F. C . C . NO. 4.

(3) FGD is provided as trunk side switching through the use of end office or access tandem switch trunk equipment. The switch trunk equipment is provided with wink start-pulsing signals and answer and disconnect supervisory signaling.

(4) FGD switching is provided with multifrequency address signaling. Up to 12 digits of the called party number dialed by the customer's end user using dual tone multifrequency or dial pulse address signals will be provided by Telephone Company equipment to the customer's premises where the Switched Access Service terminates. Such address signals will be subject to the ordinary transmission capabilities of the Local Transport provided.

(5) FGD switching, when used in the terminating direction, may be used to access valid NXXs in the LATA, time or weather announcement services of the Telephone Company, community information services of an information service provider, and other customers' services (by dialing the appropriate codes) when such services can be reached using valid NXX codes. When directly routed to and end office, only those valid NXX codes served by that office may be accessed. When routed through an access tandem, only those valid NXX codes served by end offices subtending the access tandem may be accessed. The customer will also be billed additional non-access charges for calls to certain community information services, for which rates are applicable under Telephone Company exchange service tariffs, e.g., 976 (DIAL-IT) Network Service. Additionally, non-access charges will also be billed for calls from a FGD trunk to another customer's service in accordance with that customer's applicable service rates when the Telephone Company performs the billing function for that customer. Calls in the terminating direction will not be completed to 950-1XXX or 950-0XXX access codes, local operator assistance (0- and 0+), Directory Assistance (411 and 555-1212), service codes 611 and 911 and 10XXX access codes. Calls will be completed to Directory Assistance (NPA-555-1212 or 555-1212) when FGD switching is combined with Directory Assistance switching. The combination of FGD Switched Access Service with DA Service is

provided as set forth in Section 9. following. FGD may not be switched, in the terminating direction, to Switched Access Service Feature Groups B, C or D.

(6) The Telephone Company will establish a trunk group or groups for the customer at end office switches or access tandem switches where FGD switching is provided. When required by technical limitations, a separate trunk group will be established for each type of FGD switching arrangement provided. Different types of FGD or other switching arrangements may be combined in a single trunk group at the option of the Telephone Company.

(7) The access code for FGD switching is a uniform access code of the form 10XXX. A uniform access code(s) will be the assigned number of all FGD access provided to the customer by the Telephone Company. No access code is required for calls to a customer over FGD Switched Access Service if the end user's telephone exchange service is arranged for presubscription to that customer.

Where no access code is required, the number dialed by the customer's end user shall be a seven or ten digit number for calls in the North American Numbering Plan (NANP). For international calls outside the NANP, a seven to twelve digit number may be dialed. The form of the numbers dialed by the customer's end user is NXX-XXXX, 0 or 1 + NXX-XXX, NPA + NXX-XXX, 0 or 1 + NPA + NXX-XXXX, and, when the end office is equipped for International Direct Distance Dialing (IDDD), 01 + CC + NN or 011 + CC + NN.

When the 10XXX access code is used, FGD switching also provides for dialing the digit 0 for access to the customer's operator, 911 for access to the Telephone Company's emergency reporting service, or the end-of-dialing digit (#) for cut-through access to the customer designated premises.

Unless otherwise ordered by the F.C.C., when equal access is provided through a centralized equal access arrangement the 10XXX access code may not be available in certain equal access offices. Those offices which provide FGD Switched Access Service without the 10XXX access code are identified in NATIONAL EXCHANGE

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(8) FGD switching will be arranged to accept calls from telephone exchange service locations without the need for dialing the 10XXX uniform access code. Each telephone exchange service line may be marked with a code to identify which 10XXX code its calls will be directed to for interLATA service.

(9) Unless prohibited by technical limitations, the customer's Interim NXX Translation and/or 800 Data Base traffic may, at the option of the customer, be combined in the same trunk group with the customer's non-Interim NXX Translation and/or 800 Data Base traffic. When required by technical limitations, or at the request of the customer, a separate trunk group will be established for Interim NXX Translation and/or 800 Data Base traffic.

(10) When a customer has had FGB access in an end office and subsequently replaces the FGB access with FGD access, at the mutual agreement of the customer and the Telephone Company, the Telephone Company will direct calls dialed by the customer's end users using the customer's previous FGB access code to the customer's FGD access service. The customer must be prepared to handle normally dialed FGD calls, as well as calls dialed with the FGB access code which requires the customer to receive additional address signaling from the end user. Such calls will be rated as FGD. The Telephone Company may, with 90 days' written notice to the customer, discontinue this arrangement.

(11) Operator Transfer Service (forwarding of 0- calls) may be provided with FGD Switched Access Service at Telephone Company designated Operator Services locations.

The Telephone Company will provide Operator Transfer Service for calls originating from telephone numbers associated with exchange service lines in end offices subtending the Operator Services location. Operator Transfer Service is provided as set forth in 6.10.4 following.

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6.3 Transmission Specifications

The Telephone Company provides Switching Access Service transmission with standard transmission specifications Type B or C. The transmission specifications are set forth in Section 11.2

Data Transmission parameters are also provided with each Switched Access Service transmission path. The Telephone Company will, in conjunction with the primary carrier and subject to availability of equipment, upon notification by the customer that the data parameters set forth in 11.2.2(B) are not being met, conduct tests independently or in cooperation with the customer, and take an necessary action to insure that the data parameters are met.

The Telephone Company will maintain existing transmission specifications on functioning service configurations installed prior to the effective date of this tariff except that service configurations having performance specifications exceeding the standards listed in this provision will be maintained at performance levels specified in this tariff.

The transmission specifications concerning Switched Access Service are immediate action limits and are set forth in 11.2 following. Acceptance limits are set forth in Technical Reference TR-NPL-000334. This Technical Reference also provides the basis for determining Switched Access Service maintenance limits.

6.4 Obligations of the Telephone Company

In addition to the obligations of the Telephone Company set forth in 2. preceding, the Telephone Company has certain other obligations pertaining only to the provision of Switched Access Service. These obligations are as follows:

6.4.1 Network Management

The Telephone Company will administer its network to insure the provision of acceptable service levels to all telecommunications users of the Telephone Company's network services. Generally, service levels are considered acceptable only when both end users and customers are able to establish connections with little or no delay encountered within the Telephone Company network. The Telephone Company maintains the right to apply protective controls over any traffic carried over its network, including that associated with a customer's Switched Access Service. Generally, such protective measures would only be taken as a result of

occurrences such as failure or overload of Telephone Company or customer facilities, natural disasters, mass calling or national security demands. In the event that the protective controls applied by the Telephone Company result in the complete loss of service by the customer, the customer will be granted a Credit Allowance for Service Interruption as set forth in 2.4.4(B)(2) preceding.

6.4.2 Design and Traffic Routing: of Switched Access Service

For Feature Groups A & B, the line or trunk directionality and traffic routing of Switched Access Service between the customers premises and the entry switch are determined by the customer's order with the primary carrier. FGA Service is provided to the customer by the Telephone Company via the EAS facilities of the primary carrier. FGB Service is provided to the customers by the Telephone Company via the access tandem of the primary carrier.

For Feature Group C and D the Telephone Company shall design and determine the routing of Switched Access Service, including the selection of the first point of switching and to the end offices where busy hour minutes of capacity are ordered. The Telephone Company shall also decide if capacity is to be provided by originating only, terminating only, or two-way trunk groups. Selection of facilities and equipment and traffic routing of the service are based on standard engineering methods, available facilities and equipment, and the Telephone Company traffic routing plans. If the customer desires routing or directionality different from that determined by the Telephone Company, the Telephone Company will work cooperatively with the customer in determination (1) whether the service is to be routed directly to an end office or through an access tandem switch and (2) the directionality of the service.

6.4.3 Provision of Service Performance Data

Subject to availability, end-to-end service performance data available to the Telephone Company through its own service evaluation routines, may also be made available to the customer based on previously arranged intervals and format. These data provide information on overall end-to-end call completion and non-completion performance, e . g . , customer equipment blockage, failure results and transmission performance. These data do not include service performance data which are provided under other tariff sections, e.g., testing service results. If data is to be provided in other than

paper format, the charges for such exchange will be determined on an individual case basis.

6.4.4 Trunk Group Measurement Reports

Subject to availability, the Telephone Company will make available trunk group data in the form of usage in CCS, peg count and overflow, to the customer based on previously agreed to intervals.

6.4.5 Determination of Number of Transmission Paths

The Telephone Company will determine the number of Switched Access Service transmission paths to be provided for the Switched Access Feature Group C and D busy hour minutes of capacity ordered. A transmission path is a communication path within the frequency bandwidth of approximately 300 to 3000 Hz or a derived communication path of a frequency bandwidth of approximately 300 Hz to 3000 Hz provided over a high frequency analog facility or a high speed digital facility between a customer's premises and a Telephone Company location. The number of transmission paths will be developed using the total busy hour minutes of capacity by type (as described in 6.1.1(D) preceding) for the end offices for each Feature Group ordered from a customer's designated premises. The total busy hour minutes of capacity by type for the end office will be converted to transmission paths using standard Telephone Company traffic engineering methods. The number of transmission paths provided shall be the number required based on the use of access tandem switches and end office switches.

6.4.6 Mileage Measurement

The mileage to be used to determine the appropriate billing for Local Transport facility is calculated on the airline distance between the end office switch, which may be a Remote Switching Location, where the call carried by Local Transport originates or terminates and the customer's serving wire center. Where applicable, the V&H coordinates method is used to determine the mileage. This method is set forth in the EXCHANGE CARRIER ASSOCIATION TARIFF F.C.C. NO. 2 for Wire Center Information (V&H coordinates).

To determine the rate to be billed, first compute the airline mileage using the V&H coordinates method. If the calculation results in a fraction of a

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mile, always round up to the next whole mile before determining the mileage. Multiply the calculated mileage by the Billing Percentage (BP) as set forth in EXCHANGE CARRIER ASSOCIATION TARIFF NO. 2, for the end office times the local transport facilities rate to determine the appropriate local transport facilities charges. Mileage rates for Local Transport Facilities are as set forth in 12.1 .C following.

6.5 Obligations of the Customer

In addition to the obligations of the Customer set forth in 2. preceding the Customer has certain specific obligations pertaining to the use of Switched Access Service. These obligations are as follows.

6.5.1 Report Requirements

Customers are responsible for providing the following reports to the Telephone Company, when applicable.

(A) Jurisdictional Renorts

When a Customer orders Switched Access Service for both interstate and intrastate use, the percentage of interstate and intrastate traffic will be developed as set forth in 2.3.10 preceding. Charges will be apportioned in accordance with those reports. The method to be used for determining the intrastate charges is set forth in 2.3.11 preceding.

6.5.2 Supervisory Signaling

The customer's facilities shall provide the necessary on-hook, and off-hook, answer and disconnect supervision.

6.5.3 Trunk Group Measurement Reports

With the agreement of the Customer, trunk group data in the form of usage in CCS, peg count and overflow for its end of all access trunk groups, where technologically feasible, will be made available to the Telephone Company.

This data will be used to monitor trunk group utilization and service performance and will be based on previously arranged intervals and format.

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6.6 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Switched Access Service.

6.6.1 Description and Application of Rates and Charges

There are two types of rates and charges that apply to Switched Access Service. These are usage rates and nonrecurring charges. These rates and charges are applied differently to the various rate elements as set forth in (C) following.

(A) Usage Rates

Usage rates are rates that apply only when a specific rate element is used. These are applied on a per access minute basis. Access Minute charges are accumulated over a monthly period.

(B) Nonrecurring: Charges

Nonrecurring charges are one-time charges that apply for a specific work activity (i.e., installation or charge to an existing service). The types of nonrecurring charges that apply for Switched Access Service are: installation of service and service rearrangements at the rates set forth in 12.1(D) following.

(1) Installation of Service

Nonrecurring charges apply to each Switched Service installed. For FGC and FGD, which is ordered on a busy hour minutes of capacity basis, the charge is applied on a per trunk basis but the charge applies only when the capacity ordered requires the installation of an additional trunk(s).

(C) Applications of Rates

Rates are applied to measured or assumed access minutes.

The specific application of these rates for a specific customer is dependent upon the Feature Group.

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The following rules provide the basis for applying the rates and charges:

(1) Access rates apply to all FGA, FGB, FGC and FGD access minutes.

(2) FGA and terminating FGB will be billed in accordance with the usage report received from the primary exchange carrier on a monthly basis.

(3) Where Feature Group A switched access usage is between a primary carrier and a Telephone Company with the same Extended Area Service Calling area, the Telephone Company will apply Switched Access Service End Office and Local Transport Rates as set forth in Section 12.1 following. This is in addition to those rates charged by the primary carrier.

(4) Where Feature Group B switched access usage is between a primary carrier and Telephone Company end office(s), which subtends the Feature Group B access tandem, the Telephone Company will apply Switched Access Service End Office and Local Transport rates as set forth in Section 12.1 following. This is in addition to those rates charged by the primary carrier.

6.6.2 Minimum Period

Switched Access Service is provided for a minimum period of one month.

6.6.3 Measuring Access Minutes

Customer traffic to end offices will be measure (i.e., recorded or assumed) by the Telephone Company at the end office switches or access tandem switches. Originating and terminating calls will be measured (i.e., recorded or assumed) by the Telephone Company to determine the basis for computing chargeable access minutes. In the event the customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will use the same estimates as set forth in 8.5.1(C) following as the basis for

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computing chargeable access minutes. For terminating calls over FGA, FGB, FGC to 800, FGD, and for originating calls over FGB, the measured minutes are the chargeable access minutes. For originating calls over FGC, chargeable originating access minutes are derived from recorded minutes in the following manner:

Step 1: Obtain recorded originating minutes and messages, measured as set forth in (C) following for FGC from the appropriate recording data.

Step 2: Obtain the total attempts by dividing the originating measured messages by the completion ratio. Completion ratios (CR) are obtained separately for the major call categories such as DDD, operatory, 800, 900, directory assistance and international from a sample study which analyzes the ultimate completion status of the total attempts which receive acknowledgement from the customer. That is, Measured Messages divided by Completion Ratio equal Total Attempts.

Step 3: Obtain the total non-conversion time additive (NCTA) by multiplying the total attempts (obtained in Step 2) by the NCTA per attempt ratio. The NCTA per attempt ratio is obtained from the sample study identified in Step 2 by measuring the non-conversation time associated with both completed and incompleted attempts. The total NCTA is the time on a complete attempt from the customer acknowledgement of receipt of call to called party answer (set up and ringing) plus time on an incompleted attempt from customer acknowledgement of call until the access tandem or end office receives a disconnect signal (ring - no answer, busy or network blockage). That is, Total Attempts times Non-Conversation Time per Attempt equals Total NCTA.

Step 4: Obtain chargeable originating access minutes by adding the total NCTA (obtained in Step 3) to the recorded originating measured minutes (obtained in Step 1). That is, Measured Minutes plus NCTA equal Chargeable Originating Access Minutes.

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Following is an example which illustrates how the chargeable originating access minutes are derived from the measured originating minutes using this formula.

Where:	Measured Minutes (M. Min.)	=	7,000
	Measured Messages (M. Mes.)	=	1,000
	Completion Ratio (CR)	=	.75
	NCTA per Attempt	=	.4

(1) Total Attempts = $\frac{1.000 \text{ (M. Mes.)}}{.75 \text{ (CR)}}$ = 1,333.33

(2) Total NCTA = .4 (NCTA per Attempt) times 1,333.33 = 533.33

(3) Total Chargeable Originating Access Minutes = 7,000 (M.Min.) + 533.33 (NCTA) = 7,533.33

When assumed minutes are used, the assumed minutes are the chargeable access minutes.

Usage rated FGA, FGB, FGC and FGD access minutes or fractions thereof, the exact value of the fraction being a function of the switch technology where the measurement is made, are accumulated over the billing period for each end office, and are then rounded up to the nearest access minute for each end office.

(A) Where originating and terminating measurement capability does not exist for Feature Group A provided to an entry switch, the number of access minutes will be assumed to be 4195 access minutes per line per month when the line is arranged for two way calling (1510 originating and 2685 terminating).

Where measurement capability exists for either originating or terminating usage, but not both, on a line arranged for two way calling, the number of access minutes per line per month will be an assumed 4195 or the measured usage, whichever is greater. If the usage in the measured direction exceeds 4195 access minutes per line per month, it will be assumed that there is zero usage in the unmeasured direction. If the measured usage is less than 4195 access minutes per line per month, the usage in the unmeasured direction will be the assumed usage for that unmeasured direction except that the total of measured and assumed minutes will not

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exceed the total assumed usage of 4195 access minutes designated for two way calling. If the total exceeds 4195 access minutes the assumed minutes shall be reduced so that the total of measured and unmeasured minutes equals 4195 access minutes.

Additionally, when the line is arranged for one way calling and there is no measurement capability for that direction, 1510 access minutes per month will be assumed for originating calling only lines and 2685 access minutes per month will be assumed for terminating calling only lines.

Notwithstanding the preceding, when Feature Group A is used for the provision of WATS-type service where measurement capability exists at the WATS Serving Office but not at the Feature Group A entry switch, the measured WATS-type originating and/or terminating minutes of use shall be separately summed and compared to their respective total assumed originating and/or terminating minutes of use. The number of access minutes per line per month will be the assumed or the measured usage, whichever is greater.

(B) Feature Group A Usage Measurement

For originating calls over FGA, usage measurement begins when the originating FGA entry switch receives an off-hook supervisory signal forwarded from the customer's point of termination. This off-hook signal may be provided by the customer's equipment before the called party answers, or forwarded by the customer's equipment when the called party answers.

The measurement of originating call usage over FGA ends when the originating FGA entry switch receives an on-hook supervisory signal from either the originating end user's end office, indicating the originating end user has disconnected, or the customer's point of termination, whichever is recognized first by the entry switch.

For terminating calls over FGA, usage measurement begins when the terminating FGA entry switch receives an off-hook supervisory signal from the terminating end user's end office, indicating the terminating end user has answered.

The measurement of terminating call usage over FGA ends when the terminating FGA entry switch receives an on-hook supervisory

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signal from either the terminating end user's end office, indicating the terminating end user had disconnected, or the customer's point of termination, whichever is recognized first by the entry switch.

(C) Feature Group B Usage Measurement

For originating calls over FGB, usage measurement begins when the originating FGB entry switch receives answer supervision forwarded from the customer's point of termination, indicating the customer's equipment has answered.

The measurement of originating call usage over FGB ends when the originating FGB entry switch receives disconnect supervision from either the originating end user's end office, indicating the originating end user has disconnected, or the customer's point of termination, whichever is recognized first by the entry switch.

For terminating calls over FGB, usage measurement begins when the terminating FGB entry switch receives answer supervision from the terminating end user's end office, indicating the terminating end user has answered.

The measurement of terminating call usage FGB ends when the terminating FGB entry switch receives disconnect supervision from either the terminating end user's end office, indicating the terminating end user has disconnected, or the customer's point of termination, whichever is recognized first by the entry switch.

(D) Feature Group C Usaee Measurement

For originating calls over FGC, usage measurement begins when the originating FGC entry switch receives answer supervision from the customer's point of termination, indicating the called party has answered.

The measurement of originating call usage over FGC ends when the originating FGC entry switch receives disconnect supervision from either the originating end user's end office, indicating the originating end user has disconnected, or the customer's point of termination, whichever is recognized first by the entry switch.

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For terminating calls over FGC to services other than 800 or 900, terminating FGC usage is not directly measured at the terminating entry switch, but is imputed from originating usage, excluding usage from calls to 800 or 900.

For terminating calls over FGC to 800 Service, usage measurement begins when the terminating FGC entry switch receives answer supervision from the terminating end user's end office, indicating the terminating 800 service end user has answered.

The measurement of terminating call usage over FGC to 800 Service ends when the terminating FGC entry switch receives an on-hook supervisory signal from the terminating end user's end office, indicating the terminating 800 Service end user has disconnected, or from the customer's point of terminating, whichever is recognized first by the entry switch.

(E) Feature Group D Usage Measurement

For originating calls over FGD the measured minutes are the chargeable access minutes.

For originating calls over FGD, usage measurement begins when the originating FGD first point of switching receives the first wink supervisory signal forwarded from the customer's point of termination.

The measurement of originating call usage over FGD ends when the originating FGD first point of switching receives disconnect supervision from either the originating end user's end office, indicating the origination end user has disconnect, or the customer's point of termination, whichever is recognized first the first point of switching.

For terminating calls over FGD the chargeable access minutes are either measured or derived.

For terminating calls over FGD where measurement capability exits, the measurement of chargeable access minutes begins when the terminating FGD first point of switching receives answer supervision from the terminating end user's end office, indicating

the terminating end user has answered. This measurement ends when the terminating FGD first point of switching receives disconnect supervision from either the terminating end user's end office, indicating the terminating end user has disconnected, or the customer's point of termination, whichever is recognized first by the first point of switching.

For terminating calls over FGD, where measurement capability does not exit, terminating FGD usage is derived from originating usage, excluding usage from calls to closed end services or Directory Assistance Services.

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7. Special Access Service

7.1 General

Special Access Service provides a transmission path to connect customer designated premises, directly, through a Telephone Company hub or hubs where bridging or multiplexing functions are performed, or to connect customer designated premises and a WATS serving office, or to connect a customer designated premises to a Public Packet Data Network Service. Special Access Service includes all exchange access not utilizing Telephone Company end office switches.

The connections provided by Special Access Service can be either analog or digital. Analog connections are differentiated by spectrum and bandwidth. Digital connections are differentiated by bit rate.

All regulations and conditions set forth in the Special Access Service section of this tariff shall apply only where appropriate facilities are available to perform the service.

7.1.1 Channel Types

There are three types of channels used to provide Special Access Services. Each type has its own characteristics subdivided by transmission specifications, bandwidth, speed (i.e., bit rate) and spectrum.

Customers can order a basic channel and select from a list of available transmission parameters and channel interfaces to build a system to meet specific communications requirements.

Following is a brief description of each type of channel, however, such identification is not intended to limit a customer's use of the channel nor to imply that the channel is limited to a particular use:

Voice Grade - a channel for the transmission of analog signals within an approximate bandwidth of 300 to 3000 Hz.

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Digital Data - a channel for the digital transmission of synchronous serial data at rates of 2.4, 4.8, 9.6 or 56 kbps.

High Capacity - a channel for the transmission of isochronous serial digital data at rates of 1.544, 3.152, 6.312, 44.736, or 274.176 Mbps.

The customer also has the option of ordering Voice Grade and High Capacity facilities to Telephone Company hubs for multiplexing to individual channels of a lower capacity or bandwidth. Additionally, the customer may specify optional features for the individual channels derived from the facility to further tailor the channel to meet specific communications requirements.

7.1.2 Service Descriptions

For the purposes of ordering, the customer can choose from Voice, Digital Data, or High Capacity categories of Special Access Service.

Each service consists of a basic channel to which a technical specifications package (customized or predefined) (see Section 11.5 and 11.6), channel interface(s) (see Section 11.3) and , when desired, optional features and functions (see Section 11.5) are added to construct the service desired by the customer.

Predefined and customized technical specifications packages will be provided by the Telephone Company or in conjunction with the primary carrier where technically feasible and subject to availability of equipment or in accordance with Section 10 following. If the Telephone Company determines that the requested parameter specifications are not compatible, the customer will be advised and given the opportunity to change the order. When a customized channel is ordered, the customer will be notified whether additional costs will apply. In such cases, the customer will be given an estimate of the hours to be billed and given the opportunity to change the order before any further action is taken.

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Information pertaining to the technical specifications packages indicates the transmission parameters that are available with each package. This information is displayed in matrices set forth in section 11.5 and 11.6 following.

Channel interfaces at each Point of Termination on a two-point service may be symmetrical or asymmetrical. On a multipoint service they may also be symmetrical or asymmetrical, but communications can only be provided between compatible channel interfaces. Only certain channel interfaces are compatible. These are set forth in section 11.3 and 11.4 following.

Only certain channel interface combinations are available with the predefined technical specifications packages. These are delineated as set forth below. When a customized channel is requested, all channel interface combinations available with the specified type of service are also available with the customized channel subject to the availability of equipment or in accordance with Section 10 following.

The optional features and functions available with each type of Special Access Service are described in section 11 .5. The optional features and functions information also indicates with which technical specifications packages they are available. Such information is displayed in a matrix with the optional feature or function listed down the left side and the technical specifications package listed across the top.

The Telephone Company will maintain services installed prior to the **effective date of this tariff at their existing transmission specifications,** provided such performance specifications do not exceed the standards listed in this provision. Those services exceeding the standards listed will be maintained at the performance levels specified in this tariff.

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All services installed after the effective date of this tariff will conform to the transmission specification standards contained in this tariff or in the following Technical References for each category of service.

Voice Grade	TR-TSY-000335 PUB 41004, Table 4
Digital Data	TR-NWT-000341 and associated Addendum PUB 62310
High Capacity	(MDP-326-726) TR-INS-000342 TR-NPL-000054 PUB 62411

7.1.3 Service Configurations

There are two types of services configurations over which Special Access Services are provided: two-point service and multipoint service.

(A) Two-Point Service

A two-point service connects two customer designated premises, either on a directly connected basis or through a hub where multiplexing functions are performed or a customer designated premises and a wire center equipped for Frame Relay Access Service or a customer designated premises and a WATS Serving Office.

Applicable rate elements provided by the Telephone Company are:

- Channel Terminations (one per customer designated premises),
- Channel Mileage (as applicable),
- Optional Features and Functions (when applicable).
- A Special Access Surcharge may be applicable.

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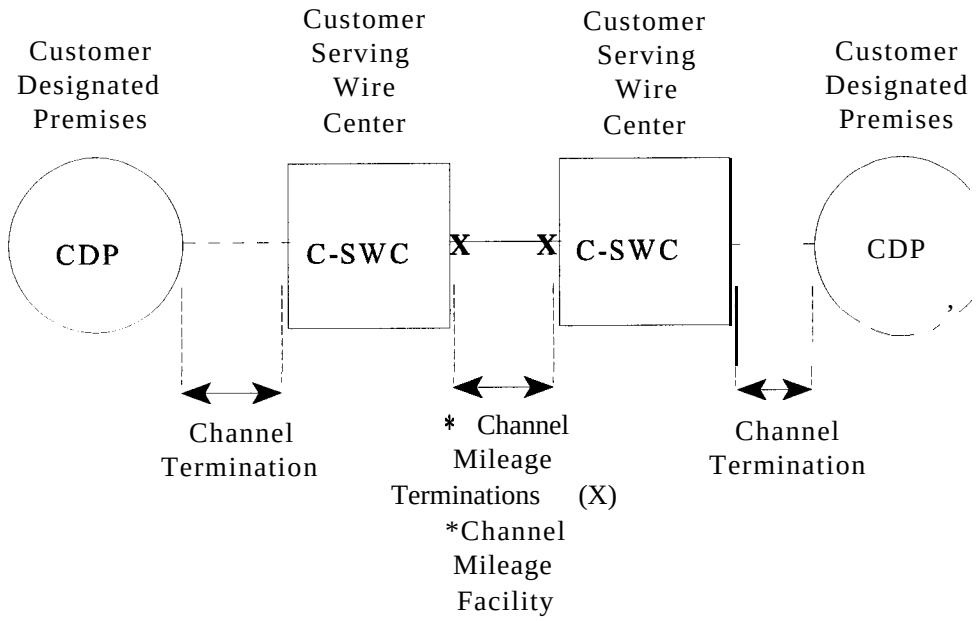
The following diagram depicts a two-point Voice Grade service connecting two Customer Designated Premises.



Applicable rate elements are:

Channel Terminations (applicable 1 per Customer Designated Premises).
Channel Mileage (1 section, Channel Mileage Facility per mile plus 2 Channel Mileage Terminations).
Optional Features and Functions (when applicable).
A Special Access Surcharge may be applicable.

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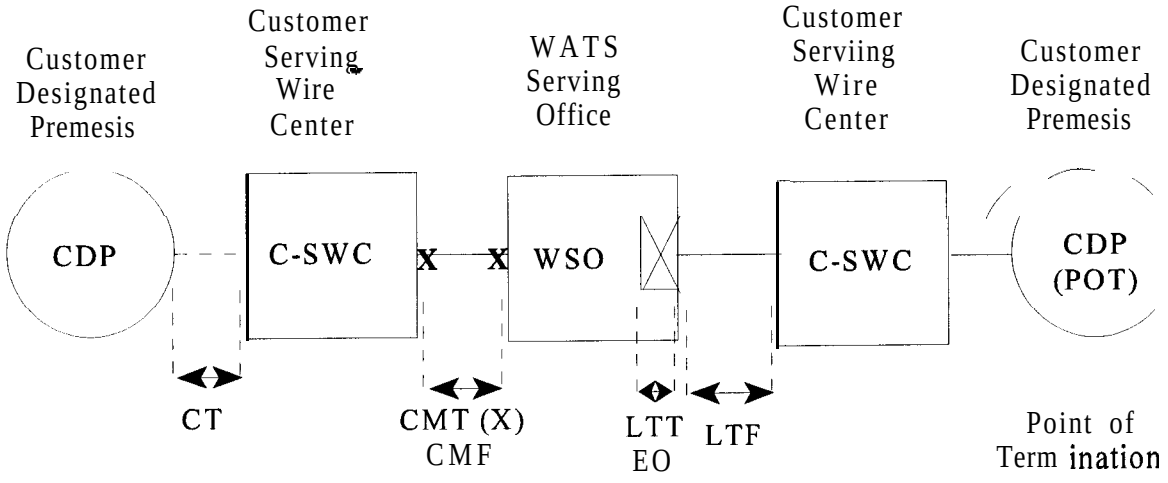
The following diagram depicts a two-point Voice Grade service connecting a customer designated premises to a WATS serving office.



Special Access

CT -Channel Termination
CMT -Channel Mileage Termination
CMF -Channel Mileage Facility

I Switched Acces

LTT -Local Transport Termination
EO -End Office elements
I LTF -Local Transport Facility

Applicable rate elements for Special Access are:

Channel Termination,
Channel Mileage (1 section, Channel Mileage Facility per mile plus 2 Channel Mileage Terminations),
Special Access Surcharge (may not apply if exemption certification is provided).
A Special Access Surcharge may be applicable.

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(B) Multinoint Service

Multipoint service connects three or more customer designated premises through a Telephone Company hub. Only certain types of Special Access Service are provided as multipoint service.

When ordering, the customer will specify the desired bridging hub(s).

Applicable rate Elements provided by the Telephone Company are:

Channel Terminations (one per customer designated premises),
Channel Mileage (as applicable between the serving wire center for each customer designated premises and the hub and between hubs and between the serving wire center and Interconnection Point),
Bridging,
Optional Features and Functions (when applicable).
A Special Access Surcharge may be applicable.

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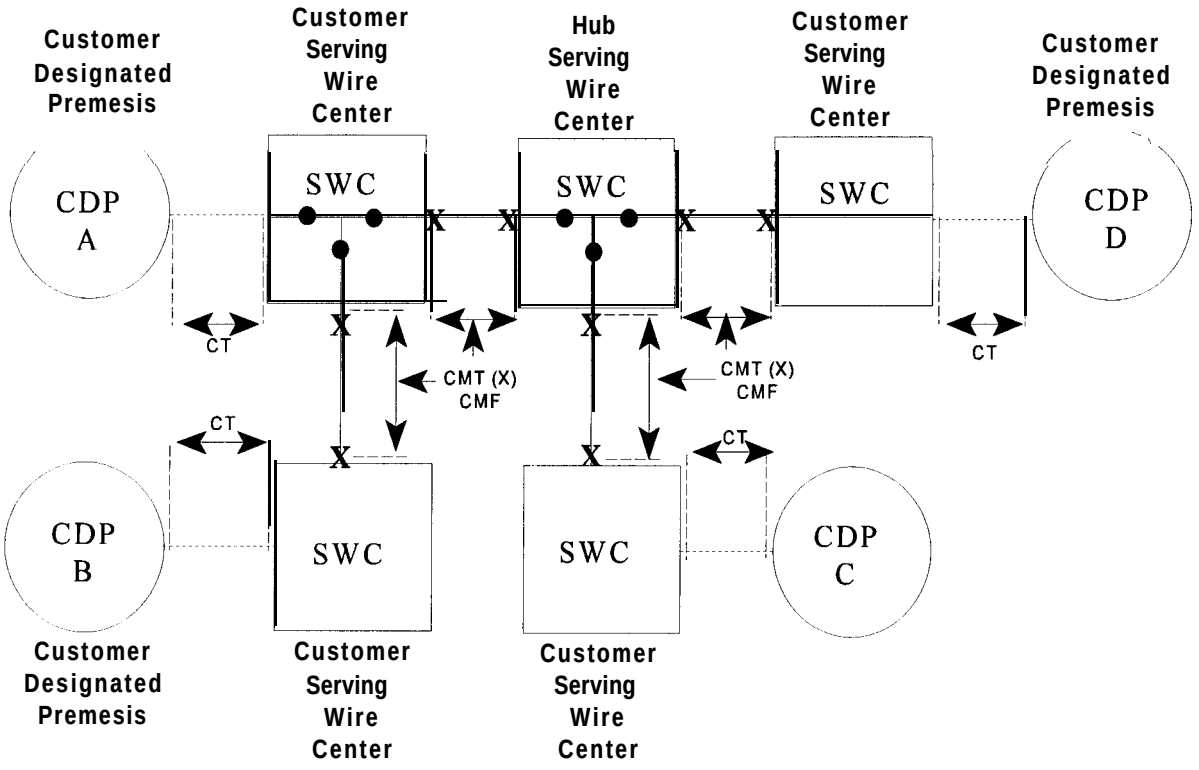
The following diagram depicts a Voice Grade multipoint service connecting four customer designated premises via two customer specified bridging hubs.



CT - Channel Termination
CMT - Channel Mileage Termination
CMF - Channel Mileage Facility
● - Bridging Port

Applicable Rate Elements:
- Channel Terminations (4 applicable),
- Channel Mileage (4 sections, channel mileage facility per mile plus 2 Channel Mileage Terminations per channel Mileage Facility section.
- Bridging Optional Feature (6 applicable, ie, each bridge port)

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7.1.4 Alternate Use

Alternate Use occurs when a service is arranged by the Telephone Company so the customer can select different types of transmission at different times. A customer may use a service in any privately beneficial manner. However, where technical or engineering changes are required to effectuate an alternate use, the Telephone Company will make such special arrangements available on an individual case basis.

7.1.5 Special Facilities Routing

A customer may request that the facilities used to provide Special Access Service be specially routed. The Telephone Company will provide such routing on an individual case basis.

7.1.6 Design Layout Report

At the request of the customer, the Telephone Company will supply the make-up of the facilities and services provided under this tariff as Special Access Service to aid the customer in designing their overall service. This information will be provided in the form of a Design Layout Report. The Design Layout Report will be provided to the customer at no charge, and will be reissued or updated whenever these facilities are materially changed.

7.1.7 Acceptance Testing

At no additional charge, the Telephone Company will, at the customer's request, subject to the availability of equipment, cooperatively test the following at the time of installation:

(A) For Voice Grade analog services, acceptance testing will include tests for loss, 3-tone slope, DC continuity, operational signaling, C-notched noise, and C-message noise when these parameters are applicable and specified in the order of service.

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(B) For digital services (i.e., Digital Data and High Capacity), acceptance tests will include tests applicable to the service as specified by the customer in the order for service.

7.1.8 Ordering Options and Conditions

Special Access Service is ordered under the Access Order provisions set forth in Section 5, preceding. Also included in that section are other charges which may be associated with ordering Special Access Service.

7.2 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Special Access Service.

7.2.1 Rate Categories

There are three basic rate categories which apply to Special Access Service:

Channel Terminations,
Channel Mileage,
Optional Features and Functions.

(A) Channel Termination

The Channel Termination rate category recovers the costs associated with the communications path between a customer designated premises and the serving wire center of that premises. Included as part of the Channel Termination is a standard channel interface arrangement which defines the technical characteristics associated with the type of facilities to which the access service is to be connected at the Point of Termination (POT) and the type of signaling capability, if any. The signaling capability is provided as an optional feature as set forth in section 7.2.1(C) following .

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One Channel termination charge applies per customer designated premises at which the channel is terminated. This charge will apply even if the customer designated premises and the serving wire center are both located in a Telephone Company building.

For a Special Access Digital Data Service 56.0 or 64.0 Kbps Bit Rate or High Capacity Service Connecting a customer designated premises to a Public Packet Data Network Service as described in Section 16, following, there will be a charge for only one Channel Termination.

For DS3 High Capacity Service, the Channel Termination rates are made up of the DS3 Capacity Interface rate and the DS3 Channel Installed rate. The Capacity Interface rate is applicable at each customer designated premises. One DS3 Channel Installed rate applies per customer designated premises at which the channel is terminated for each DS3 channel that is ordered. These charges will apply even if the customer designated premises and the serving wire center are collocated in a Telephone Company building.

(B) Channel Mileage

The Channel Mileage rate category recovers the costs associated with the end office equipment and the transmission facilities between the serving wire centers associated with two customer designated premises, between a serving wire center associated with **a customer designated premises and a Telephone Company hub,** between two Telephone Company hubs, or between a serving wire center associated with a customer designated premises and the interconnection point with the connecting carrier or the WATS serving office. Channel Mileage rates are made up of the Channel Mileage Facility rate and the Channel Mileage Termination rate.

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(1) Channel Mileage Facility

The Channel Mileage Facility rate recovers the per mile cost for the transmission path which extends between the Telephone Company serving wire centers and/or hub(s) or between the Telephone Company serving wire center and another wire center equipped for Frame Relay Access Service.

(2) Channel Mileage Termination

The Channel Mileage Termination rate recovers the cost for end office equipment associated with terminating the facility (i.e., basic circuit equipment and terminations at serving wire centers and hubs). The Channel Mileage Termination rate will apply at the serving wire center(s) for each customer designated premises and Telephone Company hub where the channel is terminated. If the Channel Mileage is between Telephone Company bridging hubs, the Channel Mileage Termination rate will apply per Telephone Company designated hub. If the Channel Mileage is between the serving wire center for a customer designated premises and a WATS Serving Office, the Channel Mileage Termination rate will apply at both the serving wire center associated with the customer designated premises and the WATS Serving Office. If the Channel Mileage is between **the serving wire center for a designated customer premises** and another wire center equipped for Frame Relay Access Service, the Channel Mileage Termination will apply only at the serving wire center for the customer designated premises. When the Channel Mileage Facility is zero (i.e., collocated serving wire centers), neither the Channel Mileage Facility rate nor the Channel Mileage Termination rate will apply.

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(C) Optional Features and Functions

The Optional Features and Functions rate category recovers the costs associated with optional features and functions which may be added to a Special Access Service to improve its quality or utility to meet specific communications requirements. These are not necessarily identifiable with specific equipment, but rather represent the end result in terms of performance characteristics which may be obtained. These characteristics may be obtained by using various combinations of equipment. Although the equipment necessary to perform a specified function may be installed at various locations along the path of the service, they will be charged for as a single rate element. The Telephone Company will work cooperatively with the customer and the primary carrier to provide the optional features and function desired but not included as part of this tariff subject to the availability of equipment or in accordance with Section 10 following.

A complete list and descriptions of Optional Features and Functions are set forth in section 11.5 .

7.2.2 Tvnes of Rates and Charges

There are two types of rates and charges. These are monthly rates and nonrecurring charges. The rates and charges are described as follows:

(A) Monthly Rates

Monthly rates are recurring rates that apply each month or fraction thereof that a Special Access Service is provided. For billing purposes, each month is considered to have 30 days.

(B) Nonrecurring: Charges

Nonrecurring charges apply to each installation of service as a one time charge. Changes to existing services other than administrative changes will be treated as a discontinuance of existing service and an installation of a new service.

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Installation of optional features and functions coincident with the initial installation of service will not incur a separate nonrecurring charge. Installation or change of optional features and functions subsequent to the installation of service will be charged an Access Order Charge per order.

Installation of another channel termination added to an existing multipoint service will incur nonrecurring charges for the additional termination only.

Nonrecurring charges apply for each Channel Termination installed as set forth in Section 12.2 following.

7.2.3 Minimum Periods

The minimum service period for all services is one month and the full monthly rate will apply to the first month.

7.2.4 Mileage Measurement

The mileage to be used to determine the monthly rate for the Channel Mileage Facility is calculated on the airline distance between the locations involved, i.e.,

the serving wire centers associated with two customer designated premises,
the serving wire center of the primary carrier along the same route for Special Access Service serving the customer designated premises,
the serving wire center associated with a customer designated premises and a Telephone Company end office or hub,
two Telephone Company hubs,
a serving wire center associated with a customer designated premises and a wire center equipped for Frame Relay Access Service,
or the serving wire center associated with a customer designated premises and a WATS Serving Office.

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The serving wire center associated with a customer designated premise is the serving wire center from which this customer designated premises would normally obtain dial tone.

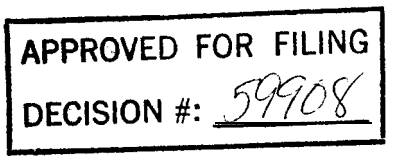
Mileage charges are shown with each channel type. To determine the rate to be billed, first compute the mileage using the V&H coordinates method, then multiply the resulting number of miles times the Channel Mileage Facility per mile rate, and add the Channel Mileage Termination rate for each termination. When the calculation results in a fraction of a mile, always round up to the next whole mile before determining the mileage and applying the rates.

When hubs are involved, mileage is computed and rates applied separately for each section of the Channel Mileage, i.e.,

customer designated premises serving wire center to hub,
hub to hub and/or
hub to customer designated premises serving wire center.

However, when any service is routed through a hub for purposes other than customer specified bridging or multiplexing (e.g., the Telephone Company chooses to so route for test access purposes), rates will be applied only to the distance calculated between the serving wire centers associated with the customer designated premises.

See the service configuration example for multipoint service as set forth in 7.1.3(B) preceding.



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7.2.5 Facility Hubs

A customer has the option of ordering Voice Grade service or High Capacity services to a facility hub for channelizing to individual services requiring lower capacity facilities.

Different locations may be designated as hubs for different facility capacities, e.g., multiplexing from digital to digital may occur at one location while multiplexing from digital to analog may occur at a different location. When placing an Access Order the customer will specify the desired hub.

The Telephone Company will commence billing the monthly rate for the service to the hub on the date specified by the customer on the Access Order. The customer will be billed for a Voice Grade or High Capacity Channel Termination, Channel Mileage (when applicable), and the multiplexer at the time the service is installed. Individual service rates (by service type) will apply for a Channel Termination and additional Channel Mileage (as required) for each channelized service. These charges will be billed to the customer as each individual service is installed.

Cascading multiplexing occurs when a High Capacity service is de-multiplexed to provide channels with a lesser capacity and one of the lesser capacity channels is further de-multiplexed. When cascading multiplexing is performed, whether in the same or a different hub, a charge for the additional multiplexing unit also applies. When cascading multiplexing is performed at different hubbing locations, Channel Mileage charges also apply between the hubs.

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7.2.6 Mixed Use Analog and Digital High Canacitv Services

Mixed use refers to a rate application pertinent only when the customer orders High Capacity facilities between a customer designated premises and a Telephone Company performs multiplexing/de-multiplexing functions and the same customer then orders the derived channels as Special and Switched Access Services.

The High Capacity facility will be ordered, provided and rated as Special Access Service. The nonrecurring charge that applies when the mixed use facility is installed will be the nonrecurring charge associated with the appropriate Special Access High Capacity Channel Termination. Rating as Special Access will continue until such time as the customer chooses to use a portion of the available capacity for Switched Access Service. Individual service (i.e., Switched or Special Access) nonrecurring charges will not apply to the individual channels of the mixed use facility.

When Special Access Service is provided utilizing a channel of the mixed use facility to a hub, High Capacity rates and charges will apply for the facility to the hub, as set forth preceding, and individual service rates and charges will apply from the hub to the customer designated premises. The rates and charges that will apply to the portion from the hub to the customer designated premises will be dependent on the specific type of Special Access Service that is provided. The applicable rates and charges will include a Channel Termination and Channel Mileage, if applicable. Rates and charges for optional features and functions associated with the service, if any, will apply for the appropriate channel type.

Switched Access Service rates and charges, as set forth in section 12.1 following, will apply for each channel of the standard use facility that is used to provide a Switched Access Service.

The customer must place an order for each individual Switched or Special Access Service utilizing the Mixed Use Facilities and specify the channel assignment for each such service.

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7.3 Surcharge for Special Access Service

7.3.1 General

The monthly Special Access Surcharge will apply to each intrastate Special Access Service that terminates on an end user's PBX or other device, where through a function of the device, the Special Access Service interconnects to the local exchange network. Interconnection functions include, but are not limited to, wiring and software functions, bridging, switching or patching of calls or stations.

The Telephone Company will bill the customer who orders the Special Access Service the Surcharge on each service installed unless the service is exempt from the surcharge as set forth in section 7.3.2 following at the rates set forth in section 12.2.1(A) following.

7.3.2 Exemption from Surcharge

Special Access Service will be exempted from the monthly surcharge if the customer provides the Telephone Company written certification that the Special Access Service termination is one of the following:

(1) an open-end termination in a Telephone Company switch of an FX line, including CCSA and CCSA-equivalent ONALS; or

(2) an analog channel termination that is used for radio or television program transmission; or

(3) a termination used for TELEX service; or

(4) a termination that by the nature of its operating characteristics could not make use of Telephone Company common lines; or

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(5) a termination that interconnects either directly or indirectly to the local exchange network where the usage is subject to Carrier Common Line charges such as, where the Special Access Service accesses only FGA and no local exchange lines, or Special Access Service between customer points of termination, or Special Access Service connecting CCSA or CCSA-type equipment (inter-machine trunks); or

(6) a termination that the customer certifies to the Telephone Company is not connected to a PBX or other device which interconnects the Special Access Service to a local exchange subscriber line.

7.3.3 Exemption Certificate

The written exemption certification is to be provided to the Telephone Company by the customer ordering the service. The certification must be signed by the customer or authorized representative and include the category of exemption, as set forth in 7.3.2 preceding, for each termination, and the date which the exemption is effective.

The customer shall also notify the Telephone Company when an exempted Special Access Service is changed or terminated again such that the exemption is no longer applicable.

The Telephone Company will work cooperatively with the customer to resolve any questions regarding the exemption certification. In addition, the Telephone Company may withhold exemption of the service until the questions are resolved.

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7.3.4 Rate Regulations

The surcharge will apply as set forth in section 7.3.1 preceding, except that a surcharge will be assessed on a per voice grade equivalent basis for Special Access Services derived from High Capacity Special Access Services as illustrated in the following example:

Special Access Service	Voice Grade Equivalent		Surcharge		Monthly Charge
DS1	24	x	$25	=	$600

The preceding example illustrates the maximum number of surcharges applicable to a DS1. If the customer claims exemption(s) as set forth in section 7.3.2 preceding or is not utilizing all available voice grade equivalents and has spare capacity, the number of surcharges would be reduced accordingly. In the case of multipoint Special Access Services, one Special Access Surcharge will apply for each termination of a Special Access Channel at an end user's premises.

The Telephone Company will bill the appropriate Special Access Surcharge to the ordering customer for each interstate Special Access Service installed unless exemption certification is provided as set forth in 7.3.3 preceding.

If a written certification is not received at the time the Special Access Service is obtained, the Surcharge will be applied. Exempt status will become effective on the certification date indicated by the customer, subject to the regulations set forth in 7.3.5 following.

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7.3.5 Crediting the Surcharge

The Telephone Company will cease billing the Special Access Surcharge when certification, as set forth in 7.3.3 preceding, is received. If the status of the Special Access Service was changed prior to receipt of the exemption certification, the Telephone Company will credit the customer's account, not to exceed ninety (90) days, based on the effective date of the change as specified by the customer in the letter of certification.

7.4 Voice Grade Service

7.4.1 Basic Channel Description

A Voice Grade channel is a channel which provides voice frequency transmission capability in the nominal frequency range of 300 to 3000 Hz and may be terminated two-wire or four-wire. Voice Grade channels are provided between customer designated premises, between a customer designated premises and the Telephone Company hub(s) or interconnection point, or between a customer designated premises and a WATS Serving Office.

Complete listings of additional information are set forth as follows.

Compatible Channel Interfaces	section 11.3 and 11.4
Optional Features and Functions	section 11.5
Technical Specification Packages	section 11.6

Rates and charges for Special Access Voice Grade Service are as set forth in section 12.2.2.

The Telephone Company will work cooperatively with the primary carrier and the customer to provide the customer desired specific service, subject to the availability of equipment.

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7.5 Digital Data Service

7.5.1 Basic Channel Description

A Digital Data channel is a channel for duplex four-wire transmission of synchronous serial data at the rate of 2.4, 4.8, 9.6, or 56 kbps. The actual bit rate is a function of the channel interface selected by the customer. The channel provides a synchronous service with timing provided by the Telephone Company through the received bit stream. Digital Data channels are provided as either hubbed or non-hubbed services between customer designated premises or between a customer designated premises and the Telephone Company hub(s) or interconnection point.

The customer may provide the Channel Service Unit-type equipment or other Network Channel Terminating Equipment associated with the Digital Data channel at the customer premises.

Complete listings of additional information are set forth as follows.

Compatible Channel Interfaces	section 11.3 and 11.4
Optional Features and Functions	section 11.5
Technical Specification Packages	section 11.6

Rates and charges for Special Access Digital Data Service are as set forth in section 12.2.3.

The Telephone Company will work cooperatively with the primary carrier and the customer to provide the customer desired specific service, subject to the availability of equipment.

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7.6 High Canacitv Service

7.6.1 Basic Channel Description

A high Capacity channel is a channel for the transmission of nominal 1.544, 3.152, 6.3 12, 44.736 or 274.176 Mbps isochronous serial data. The actual bit rate is a function of the channel interface selected by the customer. High Capacity channels are provided between customer designated premises or between a customer designated premises and the Telephone Company hub(s) or interconnection point.

Complete listings of additional information are set forth as follows.

Compatible Channel Interfaces	section 11.3 and 11.4
Optional Features and Functions	section 11.5
Technical Specification Packages	section 11.6

Rates and charges for Special Access High Capacity Service are as set forth in section 12.2.4.

The Telephone Company will work cooperatively with the primary carrier and the customer to provide the customer desired specific service, subject to the availability of equipment.

7.7 Individual Case Filings

Certain services set forth in Special Access Service, Section 7, are provided on an Individual Cases Basis. Rates and charges for Special Access Service provided on an Individual Case Basis are set forth in section 12.2.

8. Billing and Collection Service

8.1 Description of Billing and Collection Services

8.1.1 Recording: Service

Recording is the entering on magnetic tape or other acceptable media the details of customer messages originated through Switched Access Service. Recording is provided 24 hours a day, 7 days a week.

8.1.2 Assembling and Editing Service

Assembling and Editing is the aggregation of the recorded customer message detail to create individual messages and verify that the data necessary for rating is present.

8.1.3 Rating: Service

Rating Service is the transforming of the recorded, assembled and edited end user message details into rated messages in preparation for billing. Rating will be performed based on the customer provided schedule or rates for both Message Telephone Service and WATS service. Rated messages are ready for input to the Bill Processing Service of the Telephone Company.

8.1.4 Bill Processing Service

(A) Bill Processing Service is the preparation and mailing of bills, and collection amounts due from end users for their use of the customer's service.

(B) If a contractual arrangement can be mutually agreed upon, the Telephone Company will purchase from the customer the accounts receivable that arise from bills rendered by the Telephone Company to that customer's end users. If arrangements cannot be agreed on, the Telephone Company will act as billing agent in the provision of Bill Processing Service.

8. Billing and Collection Service

(C) Subject to procedures established by the customer, the Telephone Company will answer end user questions about charges billed for customer services, apply credits and adjustments to end user accounts and review customer messages removed from an end user's bill.

(D) Treatment of accounts is also provided as a part of Bill Processing. Treatment of accounts is the forwarding of notices to the end user of delinquent or unpaid end user accounts, posting of credits and adjustments.

8.1.5 Provision of Sample Message Data Service

Provision of Sample Message Data will be provided. This rate element is utilized in the provision of STARS data. If, at the request of the customer, the sample information is provided on magnetic tape, the cost of each magnetic tape utilized will be billed to the Customer.

8.2 Description of Additional Related Services

8.2.1 Program Development

Program Development charges will apply when changes requested by the customer must be made in the rating program of the Telephone Company in order to provide Rating Service. If requested, the company will estimate the charges for making the required changes prior to accepting an order from the customer authorizing the changes. The time incurred in preparing the estimate will be billed to the customer at the established hourly rate.

8.3 Undertaking the Telephone Company

The Telephone Company will provide Billing and Collection Service in its operating territory. The minimum territory, for which the Telephone Company will provide this service is all offices where the customer has ordered Switched Access Service.

8. Billing and Collection Service

8.3.1 Recording Service

(A) The Telephone Company will record **all customer messages carried** over Feature Group C or D Switched Access Service. The recording equipment will be provided at locations selected by the Telephone Company. Assembly and editing will be performed on all messages recorded during the billing period established by the Telephone Company. Except as set forth in 8.3.1(D) and 8.4 following, recorded messages detail from previous billing periods will not be recovered and made available to the customer.

(B) A standard format for the provisions of the recorded message detail will be established by the Telephone Company and provided to the customer. If, in the course of Telephone Company business, it is necessary to change the format, the Telephone Company will notify the customer six months prior tot he change.

(C) At the request of a customer, magnetic tapes containing the recorded details will be provided to the customer as part of Recording Service. The cost of each magnetic tape utilized will be billed tot he customer. Unless specified otherwise by the customer, the magnetic tapes will be sent to the customer via first class mail. However, the customer may pick up the magnetic tapes at a location designated by the Telephone Company.

(D) The Telephone Company will retain message detail for forty-five **days from the date the detail was initially made available to the** customer. At the customer's request, within the forty-five day period, the Telephone Company will provide previously recorded and provided message detail to the customer. All applicable charges will apply for the provision of this service as if the information was being provided for the first time.

8.3.2 Rating Service

(A) When Rating Service is provided, the Telephone Company will process all of the customer messages it possesses.

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(B) The Telephone Company will provide Rating Service only for customer messages originating or recorded within the operating territory of the Telephone Company or received collect messages which must be processed prior to billing. The customer messages which the Telephone Company will process may be customer messages from Recording Service as set forth in 8.1.1 preceding or, other customer messages which are chargeable in accordance with the rate schedule furnished by the customer.

(C) A record of customer call detail is required to provide Rating Service. When Recording Service and Assembling and Editing are provided, recorded details may be used as the input. When the customer provides the call details, the records must be in the standard format established by the Telephone Company and delivered to the location specified by the Telephone Company. If the customer provided records must be converted by the Telephone Company to the standard format, and the Telephone Company agrees to make the conversion, the Program Development charges apply for the hours required to design, develop, test and maintain the necessary programs. The Telephone Company will provide tot he customer the precise details of the required standard format. If, in the course of Telephone Company business, it is necessary to change the standard format, the Telephone Company will notify the customer six months prior to the change. If, due to customer error, customer provided call details must be reprocessed, all appropriate charges will apply.

(D) The Telephone Company will develop the customer's schedule of rates into a rating program. Program Development charges apply for the hours required to design, develop, test and maintain the necessary programs.

(E) Upon acceptance by the Telephone Company of an order for Rating Service, the Telephone Company will determine the period of time to implement such services on an individual order basis.

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(F) Changes to the Telephone Company billing programs necessary to properly apply the customer rates will normally be implemented within 30 days after receipt of an order for service from the customer. If the Telephone Company determines that it will be unable to implement the changes within 30 days, the customer will be notified of the conditions and period of time required. If any message detail must be reprocessed in order to apply the customer's rate changes, charges will apply on an individual case basis.

(G) Where the Telephone Company has rated customer messages which are to be billed to an end user by another Exchange Telephone Company, the Telephone Company will transmit the data to a location specified by the customer.

(H) Where the rates for the customer's services have been implemented under an accounting order ending final approval from a regulatory agency, the Telephone Company will, upon written request from the IC, keep such records as may be required to make any adjustments to the end user accounts as may be ordered by the regulatory agency. The charges for such service will be determined on an individual case basis.

8.3.3 Bill Processing; Service

(A) When Bill Processing Service is provided to the customer, the Telephone Company will establish and maintain end user accounts and prepare and render bills for all customer messages, and related rate elements it possesses.

(B) The Telephone Company will not render bills under this tariff for the provision and/or delivery of telegrams, flowers, gifts, wine or other live services that a customer offers to his end users.

(C) Rated customer messages are required to provide Bill Processing Service. If the customer provides the rated messages, those messages must be in the standard format established by the Telephone Company and delivered to the location specified by the Telephone Company. If the Telephone Company must convert customer provided messages to the standard format, all applicable

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program development charges will apply.

(D) The Telephone Company will accept customer gift certificates for payment form end users if the customer agrees in writing to redeem all such gift certificates. The format of the gift certificate must be acceptable to the Telephone Company.

(E) Unbillable messages will be handled in accordance with instructions that have been mutually determined by the Telephone Company and the customer.

(G) The customer agrees to permit the Telephone Company to determine and collect customer service deposits from all customer's and users in accordance with the Telephone Company's deposit regulations. The customer will notify its end users through its tariffs or other means that the Telephone Company will determine and collect customer service deposits.

8.4 Liability of the Telenhone Company

8.4.1 Recording Service

(A) If customer message detail is not available because the Telephone Company lost or damaged tapes or incurred recording system outages, the Telephone Company will estimate the volume of lost customer messages and associated revenue based on previously known values. This estimated customer message volume will be

Included along with the customer message detail provided tot he customer and/or provided for Rating Service. Appropriate credit adjustments will be made to the customer amounts due to account for the customer's unbillable revenue. The Company's liability is limited to the granting of a corresponding credit adjustment to the customer amount due to account for the unbillable revenue.

(B) When The Telephone Company, due to error or omission, provides incomplete data to a customer, the Telephone Company will make every reasonable effort to recover the data at no additional charge. Such request to recover the data must be make within 30 days from

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the date the details were initially made available to the customer. If the data cannot be recovered, the extent of the Telephone Company's liability for damages shall be limited as set forth in (A) preceding.

(C) In the absence of willful misconduct, no liability for damages to the customer or other person other than as set forth in (A) and (B) preceding shall be assumed by the Telephone Company.

8.4.2 Rating Service and Bill Processing Service

(A) If message detail recorded by the Telephone Company or provided by the customer is lost through the negligence of the Telephone Company and cannot be replaced or recovered, the necessary information will be estimated as set forth in Section 8.4.1(A).

(B) Errors in end user billing, when identified, will be corrected within sixty days. End user billing will be corrected for a retroactive period not to exceed three years from the date the error is discovered.

(C) In the absence of willful misconduct, the Telephone Company shall have no liability other than that described in (A) and (B) above.

8.5 Obligations of the Customer

8.5.1 Recording Service

(A) The customer shall order Recording Service from the Telephone Company. No charges apply for the processing of an order except as described in Section 8.6.2 for minimum service periods.

(B) The premises of the ordering customer shall provide the signals necessary to properly operate the Telephone Company's automatic message accounting equipment used to perform the detail recordings.

8. Billing: and Collection Service

8.5.2 Rating Service and Bill Processing Service

(A) The customer shall be responsible for collecting all balances due from end users that existed prior to ordering Bill Processing Service.

(B) When Rating Service is ordered, the customer shall furnish the Telephone Company an estimate of the number of messages to be rated monthly.

When Bill Processing Service is ordered, the customer shall furnish the Telephone Company an estimate of the number of messages for which billing is to be provided each month.

(C) The customer shall furnish all information necessary for the Telephone Company to provide the Bill Processing Service including a statement which identifies all taxes which should be applied to the customer's services.

(D) The customer shall furnish a written schedule of its rates and charges in sufficient time to allow the Telephone company to establish a rating program. The interval required to establish a rating program must be mutually agreeable to the Telephone Company and the customer.

(E) When the customer orders Bill Processing Service, the Telephone company will be provided written instructions for the handling of end user questions about bills.

Credit adjustments to end user accounts will be make subject to the written procedures provided.

8.6 Payment Arrangements and Audit Provisions

8.6.1 Audit Provision

With a minimum of two weeks written notice to the Telephone Company, the customer shall have the right to audit, during normal business hours and

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at reasonable intervals as determined by the Telephone Company, all records and accounts which contain information concerning the recording of messages for which amounts may be payable to the customer.

Adjustments shall be made by the proper party to compensate for any errors disclosed by the audit.

All information reviewed by the customer is confidential and is not to be distributed, provided or disclosed in any form to anyone not involved in the audit, nor is such information to be used for any other purpose.

8.6.2 Minimum Service Period

The minimum period for which Billing and Collection Service is provided and for which charges apply is one year. If service is terminated prior to the completion if the one year period, the Telephone Company will estimate the minimum charge by determining the average usage per day for the period service was provided and multiplying the amount by the number of days remaining in the minimum period. Six months, prior to the end of each one year period, the customer must provide written notice if service is to be discontinued at the end of the period. If notification is not received, the Telephone Company will automatically extend the services for another year.

8.6.3 Cancellation of an Order for Service

A customer may cancel an order for Billing Service on any date prior to the service date. If verbal notice of the cancellation is given, the verbal notice mut be followed by written confirmation within the (10) days. The service date for billing Service is the date the customer requests that the service start. A charge equal to all program development costs and any nonrecoverable capital costs incurred by the Telephone Company will apply to the customer.

8.6.4 Changes to Special Orders

When a customer requests changes to a pending order for Billing Service, and the change can be accommodated by the Telephone Company, the requested change will be made. A charge equal to any costs incurred by the

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Telephone Company because of the change will apply.

8.7 Rate Regulations

Rates for Billing and Collection Services are negotiated by contract on an individual case basis.

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9. Additional Engineering:. Additional Labor and Miscellaneous Services

Subsections 9.1, 9.2, and 9.3 address Additional Engineering, Additional Labor, and Miscellaneous Services respectively. In this section, normally scheduled working hours are an employee's scheduled work period in any given calendar day (e.g., 8:00 a.m. to 5:00 p.m.) for the application of rates based on working hours. An Access Order Charge as described in 5.2 preceding may apply to services ordered from this section.

9.1 Additional Engineering

Additional Engineering will be undertaken only after the Telephone Company has notified the customer that additional engineering charges apply as set forth in 12.4(A) following and the customer agrees to such charges.

Additional Engineering will be provided by the Telephone Company at the request of the Customer only when:

(A) A customer requests additional technical information after the Telephone Company has already provided the technical information normally included on the Design Layout Report (DLR) as set forth in 6.1.4 and 7.1.6 preceding.

(B) Additional Engineering time is incurred by the Telephone Company to engineer a customer's request for a customized service as set forth in 7.1.2 preceding.

(C) A customer requested Design Change requires the expenditure of additional Engineering time. Such additional Engineering time is incurred by the Telephone Company for the engineering review. The charge for additional engineering time relating to the engineering review, which is undertaken to determine if a design change is indeed required, will apply whether or not the customer authorizes the Telephone Company to proceed with the Design Change.

9.2 Additional Labor

Additional Labor is that labor requested by the customer on a given service and agreed to by the Telephone Company as set forth in 9.2.1 through 9.2.5 following. The Telephone Company will notify the customer that Additional Labor charges as set forth in 12.4(B) following will apply before any additional labor is undertaken. A call-out of a Telephone Company employee at a time not consecutive with the

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9. Additional Engineering, Additional Labor and Miscellaneous Services

employee's scheduled work period is subject to a minimum charge of four hours.

9.2.1 Overtime Installation

Overtime installation is that Telephone Company installation effort outside of normally scheduled working hours.

9.2.2 Overtime Repair

Overtime repair is that Telephone Company effort performed outside of normally scheduled working hours.

9.2.3 Standby

Standby includes all time in excess of one-half (1/2) hour during which telephone Company personnel standby to make installation acceptance tests or cooperative tests with a customer to verify facility repair on a given service.

9.2.4 Testing and Maintenance with Other Telephone Comnanies

Additional testing, maintenance or repair of facilities which connect other telephone companies is that which is in addition to the normal effort required to test, maintain or repair facilities provided solely by the Telephone Company.

9.2.5 Other Labor

Other labor is that additional labor not included in 9.2.1 through 9.2.4 preceding and labor incurred to accommodate a specific customer request that involves only labor which is not covered by any other section of this tariff.

9.3 Miscellaneous Services

9.3.1 Testing Services

Testing Services offered under this section of the tariff are optional and subject to rates and charges as set forth in 12.4(C) following. A call-out of

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a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge for four hours. Other testing services, as described in 6.1.7 and 7.1.7 preceding, are provided by the Telephone Company in association with Access Services and are furnished at no additional charge.

Testing Services are normally provided by Telephone Company personnel at Telephone Company locations; however, provisions are made in (B)(2) following for a customer to request Telephone Company personnel to perform Testing Services at the customer designated premises.

The offering of Testing Services under this section of the tariff is made subject to the availability of the necessary qualified personnel and test equipment at the various test locations mentioned in (A) and (B) following.

(A) Switched Access Service

Testing Services for Switched Access are comprised of (a) tests which are performed during the installation of a Switched Access Service, (i.e. Acceptance tests), (b) tests which are performed after customer acceptance of such access services and which are without charge (i.e., routine testing) and (c) additional tests which are performed during or after customer acceptance of such access services and for which additional charges apply, (i.e., Additional Cooperative Acceptance Tests and in-service tests).

Routine tests are those tests performed by the Telephone Company on a regular basis, as set forth in 6.1.7 preceding which are required to maintain Switched Access Service. Additional in-service tests may be done on an automatic basis (no Telephone Company or customer technicians involved), or on a manual basis (Telephone Company technicians involved at Telephone Company offices and Telephone Company or customer technicians involved at the customer designated premises).

Testing services are ordered to the Dial Tone Office for FGA, to the access tandem or end office for FGB (wherever the FGB service is ordered) and to the end office for FGs C and D. Testing Services for

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Directory Assistance Service not routed through an access tandem is ordered to a Directory Assistance Location for each NPA.

(1) Additional Coouerative Acceptance Testing

Additional Cooperative Acceptance Testing of Switched Access Service involves the Telephone Company provision of a technician at its offices and the customer provision of a technician at its premises, with suitable test equipment to perform the required tests.

Additional Cooperative Acceptance Tests may, for example, consist of the following tests:

- Impulse Noise
- Phase Jitter
- Signal to C-Notched Noise Ratio
- Intermodulation (nonlinear) Distortion
- Frequency Shift (offset)
- Envelope Delay Distortion
- Dial Pulse Percent Break

(2) Additional Automatic Testing

Additional automatic testing (AAT) of switched access services (feature groups B, C and D), is a service where the customer provides remote office test lines and 105 test lines with associated responders or their functional equivalent. The customer may order, at additional charges, gain-slope and C-notched noise testing and may order the routine tests (1004 Hz loss, C-message noise and balance) on an as-needed or more than routine schedule.

The telephone Company will provide an AAT report that lists the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on an as-occurs basis.

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The Additional Tests, (i.e., gain slope, C-notched noise, 1004 Hz loss, C-message noise and balance) may be ordered by the customer at additional charges, 60 days prior to the start of the customer prescribed schedule. The rates for time required to perform Additional Automatic Tests are as set forth in 12.4(C) following.

(3) Additional Manual Testing

Additional Manual Testing (AMT) of Switched access Services (feature groups A, B, C, and D and Directory Access Service not routed through an access tandem), is a service where the Telephone Company provides a technician at its offices and the Telephone Company or customer provides a technician at the customer designated premises, with suitable test equipment to perform the required tests. Such additional tests will normally consist of gain-slope and C-notched noise testing. However, the Telephone Company will conduct any additional tests which the customer may request.

The Telephone Company will provide an AMT report listing the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on a per occurrence basis.

The Additional manual Tests may be ordered by the customer at additional charges, 60 days prior to the start of the testing schedule as mutually agreed to by the customer and the Telephone Company.

The hourly rates for Additional Manual Testing are as set forth in 12.4(C) following.

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(4) Obligations of the Customer

(A) The customer shall provide the Remote Office Test Line priming data to the Telephone Company, as appropriate, to support routine testing as set forth in 6.1.7 preceding or AAT as set forth in 9.3.1(A)(2) preceding.

(B) The customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

(B) Special Access Service

The Telephone Company will provide assistance in performing specific tests requested by the customer.

(1) Additional Coonerative Acceptance Testing

When a customer provides a technician at its premises or at an end users premises, with suitable test equipment to perform the requested tests, the Telephone Company will provide a technician at its office for the purpose of conducting Additional Cooperative Acceptance Testing on Voice Grade Services. At the customer's request, the Telephone Company will provide a technician at the Customer's premises or at the end user premises. These tests may, for example, consist of the following:

- Impulse Noise
- Phase Jitter
- Envelope Delay Distortion
- Intermodulation Distortion (i.e., harmonic distortion)
- Frequency Shift (offset)
- Attenuation Distortion (i.e., frequency response)
- Echo Control

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(2) Additional Manual Testing

The Telephone Company will provide a technician at its premises, and the Telephone Company or customer will provide a technician at the customer's designated premises with suitable test equipment to perform the requested tests.

(3) Obligations of the Customer

When the customer subscribes to Testing Service as set forth in this section, the customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

9.3.2 Maintenance of Service

(A) When a customer reports a trouble to the Telephone Company for clearance and no trouble is found in the Telephone Company's facilities, the customer shall be responsible for payment of a Maintenance of Service charge as set forth in 12.4(C) following for the period of time from when Telephone Company personnel are dispatched at the request of the customer, to the customer designated premises to when the work is completed. Failure of Telephone Company personnel to find trouble in Telephone Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.

(B) The customer shall be responsible for payment of a Maintenance of Service charge when the Telephone Company dispatches personnel to the customer designated premises, and the trouble is in equipment or communications systems provided by other than the Telephone Company or in detariffed CPE provided by the Telephone Company.

In either (A) or (B) preceding, no credit allowance will be applicable for the interruption involved if the Maintenance of Service Charge Applies.

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9. Additional Engineering, Additional Labor and Miscellaneous Services

9.4 Presubscrintion

Presubscription is the process by which end user customers may select and designate to the Telephone Company an IC to access, without an access code, for intralata calls. This IC is referred to as the end user's predesignated IC.

The charge for this service is listed in Section 12.4. The Intralata Presubscription fee is in addition to the federal presubscription fee.

10. Special Construction

10.1 General

This section addresses special construction of Telephone Company facilities which are used to provide services offered under this tariff.

When special construction is required as described in 10.2 following, the provisions of this section apply in addition to regulations, rates, and charges as set forth in other sections of this tariff.

Regulations and rates will be added to this tariff for each specific application of Special Construction. The customer will provide written authorization to the Telephone Company prior to the commencement of any Special Construction.

10.2 Conditions Requiring Special Construction

Special construction is required when suitable facilities are not available to meet a customer's order for service and one or more of the following conditions are exist:

The Telephone Company has no other requirement for the facilities constructed at the customer's request;

The customer requests that service be furnished using a type of facility, or via a route, other than that which the Telephone Company would otherwise utilize in furnishing the requested service;

The customer requests the construction of more facilities than are required to satisfy its order for service;

The customer requests construction be expedited resulting in added cost to the Telephone Company;

The customer requests that temporary facilities be constructed until permanent facilities are available.

11. Interface Groups . Transmission Specifications. Channel Interfaces. Special Access Ontional Features and Functions. and Technical Specification Packages

11.1 Local Transport Interface Groups

Interface Group 1 is provided with Type C Transmission Specifications, and Interface Groups 2 through 10 are provided with Type A or B Transmission Specifications, depending on the Feature Group and whether the Access Service is routed directly or through an access tandem. All Interface Groups are provided with Data Transmission Parameters.

Only certain premises interfaces are available at the customer designated premises. The premises interfaces associated with the Interface Groups may vary among Feature Groups. The various premises interfaces which are available with the Interface Groups, and the Feature Groups with which they may be used, are set forth in 11.1.1 following.

11.1.1 Interface Group 1

Interface Group 1, except as set forth in the following, provides two-wire voice frequency transmission at the point of termination at the customer's premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Interface Group 1 is not provided in association with FGC and FGD when the first point of switching is an access tandem. In addition, Interface Group 1 is not provided in association with FGB, FGC, or FGD when the first point of switching provides only four-wire terminations.

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of any typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency of 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M

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signaling, will be reverse battery signaling.

11.1.2 Interface Group 2

Interface Group 2 provides four-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The transmission path between the point of termination at the customer designated premises and the first point of switching may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGA, such signaling will be loop start or ground start signaling.

When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

11.1.3 Interface Group 3

Interface Group 3 provides group level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 60 to 108 kHz, with the capability to channelize up to 12 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex equipment to derive 12 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz. The interface is provided with individual transmission path SF supervisory signaling.

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11.1.4 Interface Group 4

Interface Group 4 provides supergroup level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 312 to 552 kHz, with the capability to channelize up to 60 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex and channel bank equipment to derive 60 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with individual transmission path SF supervisory signaling.

11.1.5 Interface Group 5

Interface Group 5 provides mastergroup level analog transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals between the frequencies of 564 to 3084 kHz, with the capability to channelize up to 600 voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Group are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex and channel bank equipment to derive 600 transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interface is provided with individual transmission path SF supervisory signaling.

11.1.6 Interface Group 6

Interface Group 6 provides DS1 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 1.544 Mbps, with the

11. Interface Grouns. Transmission Specifications, Channel Interfaces. Special Access **Optional** Features and Functions. and Technical Specification **Packages**

capability to channelize up to 24 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive 24 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first point of switching, a DS1 signal in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

11.1.7 Interface Group 7

Interface Group 7 provides DS1C level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 3.152 Mbps, with the capability to channelize up to 48 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 48 voice frequency transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations provided, the Telephone Company will provide, at the first point of switching, DS1 signals in D3/D4 format. The interface is provided with individual transmission path bit stream supervisory signaling.

11.1.8 Interface Group 8

Interface Group 8 provides DS2 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 6.312 Mbps, with the capability to channelize up to 96 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment in its office to derive up to 96 transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz.

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When digital switching, or analog switching with digital carrier terminations is provided, the Telephone Company will provided, at the first point of switching, DS1 signals in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

11.1.9 Interface Group 9

Interface Group 9 provides DS3 level digital transmission at the point of termination at the customer designated premises. The interface is capable of transmitting electrical signals at a nominal 44.736 Mbps, with the capability to channelize up to 672 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 672 transmission paths of a frequency bandwidth of approximately 300 to 300 Hz. When digital switching, or analog switching with digital carrier termination is provided, the Telephone Company will provided, at the first point of switching DS1 signals in D3/D4 format.

The interface is provided with individual transmission path bit stream supervisory signaling.

11.1. 10Interface Group 10

Interface Group 10 provides DS4 level digital transmission at the point of termination at the customer designated premises.

The interface is capable of transmitting electrical signals at a nominal 274.176 Mbps, with the capability to channelize up to 4032 voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog termination is provided, the Telephone Company will provide multiplex and channel bank equipment to derive up to 4032 transmission paths of a frequency of bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide, at the first

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point of switching, DS1 signals in D3/D4 format. The interface is provided with individual transmission path bit stream supervisory signaling.

11.1.11Available Premises Interface Codes

Following is a matrix showing, for each Interface Group, which premises interface codes are available as a function of the Telephone Company switch supervisory signaling and Feature Group. For explanations of these codes, see the Glossary of Channel Interface Codes in 7.3.1 following.

Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature Group A	B	C	D
1	LO	2LS2	X			
	LO	2LS3	X			
	GO	2GS2	X			
	GO	2GS3	X			
	LO, GO	2DX3	X			
	LO, GO	4EA3-E	X			
	LO, GO	4EA3-M	X			
	LO, GO	6EB3-E	X			
	LO, GO	6EB3-M	X			
	RV, EA, EB, EC	2DX3		x	x	x
	RV, EA, EB, EC	4EA3-E		x	x	x
	RV, EA, EB, EC	4EA3-M		x	x	x
	RV, EA, EB, EC	6EB3-E		x	x	x
	RV, EA, EB, EC	6EB3-M		x	x	x
	EA, EB, EC	6EC3			x	x
	RV	2RV3-O		x	x	x
	RV	2RV3-T		x	x	x
2	LO, GO	4SF2	X			
	LO, GO	4SF3	X			
	LO	4LS2	X			
	LO	4LS3	X			
	LO	6LS2	X			

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Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature A	B	Group C	D
2	G O	4GS2	X			
	G O	4GS3	X			
	G O	6GS2	X			
	LO, GO	4DX2	X			
	LO, GO	4DX3	X			
	LO, GO	6EA2-E	X			
	LO, GO	6EA2-M	X			
	LO, GO	8EB2-E	X			
	LO, GO	8EB2-M	X			
	LO, GO	6EX2-M	X			
	RV, EA, EB, EC	4SF2		x	x	x
	RV, EA, EB, EC	4SF3		X		
	RV, EA, EB, EC	4DX2		x	x	x
	RV, EA, EB, EC	4DX3		X		
	RV, EA, EB, EC	6DX2			X	
	RV, EA, EB, EC	6EA2-E		x	x	x
	RV, EA, EB, EC	6EA2-M		x	x	x
	RV, EA, EB, EC	8EB2-E		x	x	x
	RV, EA, EB, EC	8EB2-M		x	x	x
	EA, EB, EC	8EC2-M			x	x
	R V	4RV2-O		x	x	x
	R V	4RV2-T		x	x	x
	R V	4RV3-O		x	x	
	R V	4RV3-T		x	x	

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Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	Feature A	Group B	C	D
3	LO, GO	4AH5-B	X			
	RV, EA, EB, EC	4AH5-B		x	x	x
4	LO, GO	4AH6-C	X			
	RV, EA, EB, EC	4AH6-C		x	x	x
5	LO, GO	4AH6-D	X			
	RV, EA, EB, EC	4AH6-D		x	x	x
6	LO, GO	4DS9-15	X			
	LO, GO	4DS9-15L	X			
	RV, EA, EB, EC	4DS9-15		x	x	x
	RV, EA, EB, EC	4DS9-15L		x	x	x
7	LO, GO	4DS9-31	X			
	RV, EA, EB, EC	4DS9-31		x	x	x
	LO, GO	4DS9-31L	X			
	RV, EA, EB, EC	4DS9-31L		x	x	x
8	LO, GO	4DS0-63	X			
	LO, GO	4DS0-63L	X			
	RV, EA, EB, EC	4DS0-63		x	x	x
	RV, EA, EB, EC	4DS0-63L		x	x	x
9	LO, GO	4DS6-44	X			
	LO, GO	4DS6-44L	X			
	RV, EA, EB, EC	4DS6-44		x	x	x
	RV, EA, EB, EC	4DS6-44L		x	x	x

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Interface Group	Telephone Company Switch Sunervisory Sipnaling	Premises Interface Code	Feature A	Group B	C	D
10	LO, GO	4DS6-27	X			
	LO, GO	4DS6-27L	X			
	RV, EA, EB, EC	4DS6-27		x	x	x
	RV, EA, EB, EC	4DS6-27L		x	x	x

11.1.12 Supervisory Signaling

For Interface Groups 1 and 2

DX Supervisory Signaling
E&M Type I Supervisory Signaling,
E&M Type II Supervisory Signaling, or
E&M Type III Supervisory Signaling

For Interface Group 2

SF Supervisory Signaling, or
Tandem Supervisory Signaling

For Interface Groups 6 through 10

These Interface Groups may, at the option of the customer, be provided with individual transmission path SF supervisory signaling where such signaling is available in Telephone Company central offices. Generally such signaling is available only where the entry switch provides an analog, i.e., non digital, interface to the transport termination.

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11.2 Transmission Snecifications Switched Access Service

11.2.1 Standard Transmission Specifications

Following are descriptions of the three Standard Transmission Specifications available with Switched Access Service Feature Groups. The specific applications in terms of the Feature Groups and Interface Groups with which the Feature Group Standard Transmission Specifications are provided are set forth in 6.2.1(C), 6.2.2(C), 6.2.3(C), and 6.2.4(C) preceding.

(A) Type A Transmission Snecifications

Type A Transmission Specifications is provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is ± 2.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -1 .O dB to +3.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

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Route Miles	C-Message Noise
less than 50	32 dBrnCO
51 to 100	34 dBrnCO
101 to 200	37 dBrnCO
201 to 400	40 dBrnCO
401 to 1000	42 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBmO holding tone is less than or equal to 45 dBrnCO.

(5) Echo Control

Echo Control, identified as Equal Level Echo Path Loss, and expressed as Echo Return Loss and Singing Return Loss, is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	Echo Return Loss	Singing Return Loss
POT to Access Tandem	21 dB	14 dB
POT to End Office		
- Direct	N/A	N/A
- Via Access Tandem	16 dB	11 dB

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(6) Standard Return Loss

Standard Return Loss expressed as Echo Return Loss and Singing Return Loss on two-wire ports of a four-wire point of termination shall be equal to or greater than:

Echo Return Loss	Singing Return Loss
5 dB	2.5 dB

(B) Type B Transmission Specifications

Type B Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Loss (EML) is ± 2.5 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -2.0 dB to +4.0 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

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Route Miles	C-Message Noise* Type B1	Type 2
less than 50	32 dBrnCO	35 dBrnCO
51 to 100	33 dBrnCO	37 dBrnCO
101 to 200	35 dBrnCO	40 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBmO holding tone is less than or equal to 47 dBrnCO.

(5) Echo Control

Echo Control, identified as Impedance Balance for FGA and FGB and Equal Level Echo Path Loss for FGC and FGD, and expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. The ERL and SRL also differ by Feature Group, type of termination, and type of transmission path. They are greater than or equal to the following:

* For Feature Groups C and D only Type B2 will be provided. For Feature Groups A and B, Type B1 or B2 will be provided as set forth in Technical Reference PUB 62500.

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	Echo Return Loss	Singing Return Loss
POT of Access Tandem		
- Terminated in 4-Wire Trunk	21 dB	14 dB
- Terminated in 2-Wire Trunk	16 dB	11 dB
POT to End Office		
- Direct	16 dB	11 dB
- Via Access Tandem		
. For FGB access	8 dB	4 dB
For FGC access (Effective 4-Wire transmission path at end office)	16 dB	11 dB
. For FGC access (Effective 2-Wire transmission path at end office)	13 dB	6 dB

(6) Standard Return Loss

Standard Return Loss, expressed as Echo Return Loss and Singing Return Loss, on two-wire ports of a four-wire point of termination shall be equal to or greater than:

Echo Return Loss	Singing Return Loss
5 dB	2.5 dB

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(C) Type C Transmission Specifications

Type C Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Loss (EML) is ± 3.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -2.0 dB to +5 .5 dB.

(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

Route Miles	C-Message Noise* Type C1	Type C2
less than 50	32 dBrnCO	38 dBrnCO
51 to 100	33 dBrnCO	39 dBrnCO
101 to 200	35 dBrnCO	41 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

* For Feature Groups C and D only Type C2 will be provided. For Feature Groups A and B, Type Cl or C2 will be provided as set forth in Technical Reference PUB 62500.

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(4) C-Notch

The maximum C-Notch Noise, utilizing a -16 dBmO holding tone is less than or equal to 47 dBrnCO.

(5) Echo Control

Echo Control, identified as Return Loss and expressed as Echo Return Loss and Singing Return Loss is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	Echo Return Loss	Singing Return Loss
POT to Access Tandem	13 dB	6 dB
POT to End Office		
• Direct	13 dB	6 dB
• Via Access Tandem (For FGB only)	8 dB	4 dB

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11.2.2 Data Transmission Parameters

Two types of Data Transmission Parameters, i.e., Type DA and Type DB, are provided for the Feature Group arrangements. The specific applications in terms of the Feature Groups with which they are provided are set forth in 6.2.1 (C), 6.2.2(C), 6.2.3(C) and 6.2.4(C) preceding. Following are descriptions of each.

(A) Data Transmission Parameters Type DA

(1) Signal to C-Notched Noise Ratio

The Signal to C-Notched Noise Ratio is equal to or greater than 33 dB.

(2) Envelop Delay Distortion

The maximum Envelop Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles	500	microseconds
equal to or greater than 50 route miles	900	microseconds

1004 to 2404 Hz

less than 50 route miles	200	microseconds
equal to or greater than 50 route miles	400	microseconds

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(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 65 dBrnCO threshold in 15 minutes is not more than 15 counts.

(4) Inter-modulation Distortion

The Second Order (R2) and Third Order (R3) Inter-modulation Distortion products are equal to or greater than:

Second Order (R2)	33 dB
Third Order (R3)	37 dB

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency and is less than or equal to 5 degrees peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

(B) Data Transmission Parameters Type DB

(1) Signal to C-Notched Noise Ratia

The signal to C-Notched Noise Ratio is equal to or greater than 30 dB.

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(2) Envelop Delay Distortion

The maximum Envelop Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles	800 microseconds
equal to or greater than 50 route miles	1000 microseconds

1004 to 2404 Hz

less than 50 route miles	320 microseconds
equal to or greater than 50 route miles	500 microseconds

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dBrnCO threshold in 15 minutes is not more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	31 dB
Third Order (R3)	34 dB

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(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency and is less than or equal to 7 degrees peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

11.3 Special Access Channel Interface and Network Channel Codes

This section explains the Channel Interface codes and Network Channel codes that the customer must specify when ordering Special Access Service. Included is an example of which explains the specific characters of the code, a glossary of Channel Interface codes, impedance levels, Network Channel codes and compatible Channel Interfaces.

Example: If the customer specifies a NT Network Code and a 2DC8-3 Channel Interface at the customer's premises, the following is being requested:

NT	=	Metallic Channel with a Predefined Technical Specification Package (1)
2	=	Number of physical wires at customer premises
DC	=	Facility interface for direct current or voltage
8	=	Variable impedance level
3	=	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)

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11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Packages

11.3.1 Glossary of Channel Interface Codes and Options

Code	Option	Definition
AB -		Accept 20 Hz ringing signal at customer's point of termination
AC -		Accepts 20 Hz ringing signal at customer's end user's point of termination
CT -		Centrex Tie Trunk Termination
DA -		Data stream in VF frequency band at customer's end user's point of termination
DB -		Data stream in VF frequency band at customer's point of termination
	10	VF for TG1 and TG2
	43	VF for 43 Telegraph Carrier type signals, TG1 and TG2
DC -		Direct current or voltage
	1	Monitoring interface with series RC combination (McCulloh format)
	2	Telephone Company energized alarm channel
	3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)
DD -		DATAPHONE Select-A-Station (and TABS) interface at customer's point of termination
DE -		DATAPHONE Select-A-Station (and TABS) interface at the customer's end user's point of termination
DS -		Digital hierarchy interface
	15	1.544 Mbps (DS1) format per PUB 41451 plus D4
	15E	8-bit PCM encoded in one 64 Kbps of the DS1 signal
	15F	8-bit PCM encoded in two 64 kbps of the DS1 signal

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Code		Option	Definition
	-	15G	8-bit PCM encoded in three 64 kbps of the DS1 signal
	-	15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal
	-	15J	1.544 Mpbs format per PUB 41451
	-	15K	1.544 Mpbs format per PUB 4145 1 plus extended framing format
	-	15L	1.544 Mpbs (DS1) with SF signaling
	-	27	274.176 Mpbs (DS4)
	-	27L	274.176 Mpbs (DS4) with SF signaling
	-	31	3.152 Mpbs (DS1C)
	-	31L	3.152 Mpbs (DS1C) with SF signaling
	-	44	44.736 (DS3)
	-	44L	44.736 (DS3) with SF signaling
DS	-	63	6.312 Mbps (DS2)
		63L	6.3 12 Mbps (DS2) with SF signaling
DU	-		Digital access interface
		24	2.4 kbps
	-	48	4.8 kbps
	-	56	56.0 kbps
	-	96	9.6 kbps
	-	A	1.544 Mpbs format per PUB 41451
		B	1.544 Mpbs format per PUB 4145 1 plus D4
	-	C	1.544 Mpbs format per PUB 41451 plus extended framing format
DX	-		Duplex signaling interface at customer's point of termination
DY	-		Duplex signaling interface at customer's end user's point of termination

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Code	Option	Definition
EA -	E	Type 1 E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EA -	M	Type 1 E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EB -	E	Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EB -	M	Type II E&M Lead Signaling. Customer at POT originates on M Lead.
EC -		Type III E&M signaling at customer POT
EX -	A	Tandem channel unit signaling for loop start or ground start and customer supplies open end (dial tone, etc.) functions.
EX -	B	Tandem channel unit signaling for loop start or ground start and customer supplies closed end (dial pulsing, etc.) functions.
GO -		Ground start loop signaling - open end function by customer or customer's end user
GS -		Ground start loop signaling - closed end function by customer or customer's end user
IA -		E.I.A. (25 pin RS-232)
LA -		End user loop start loop signaling - Type A OPS registered port open end
LB -		End user loop start loop signaling - Type B OPS registered port open end
LC -		End user loop start loop signaling - Type C OPS registered port open end
LO -		Loop start loops signaling - open end function by customer or customer's end user
LR -		20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR

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Code		Option	Definition
LS	-		Loop start loop signaling - closed end function by customer or customer's end user
NO	-		No signaling interface, transmission only
PG	-		Program transmission - no dc signaling
	-	1	Nominal frequency from 50 to 15000 Hz
	-	3	Nominal frequency from 200 to 3500 Hz
	-	5	Nominal frequency from 100 to 5000 Hz
	-	8	Nominal frequency from 50 to 8000 Hz
PR	-		Protective Relaying *
RV	-	0	Reverse battery signaling, one-way operation, originate by customer
	-	T	Reverse battery signaling, one-way operation, terminate function by customer or customer's end user
SF	-		Single frequency signaling with VF band at either customer POT or customer's end user POT
TF	-		Telephotograph interface
TT	-		Telegraph/teletypewriter interface at either customer POT or customer's end user POT
	-	2	20.0 milliamperes
	-	3	3 .O milliamperes
	-	6	62.5 milliamperes

* Available only for the transmission of audio tone protective relying signals used in the protection of electronic power systems during fault conditions.

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Code	Option	Definition
TV	-	Television interface
	1	Combined (diplexed) video and one audio signal
	2	Combined (diplexed) video and two audio signals
	5	Video plus one (or two) audio 5 kHz signal(s) or one (or two) two wire
	15	Video plus one (or two) audio 15 kHz signal(s)

11.3.2 Impedance

The nominal reference impedance with which the channel will be terminated for the purpose of evaluating transmission performance:

Value (ohms)	Code(s)
110	0
150	1
600	2
900	3+
135	5
75	6
124	7
Variable	8
100	9

+ For those interface codes with a 4-wire transmission path at the customer designated POT, rather than a standard 900 ohm impedance the code (3) denotes a customer provided transmission equipment termination. Such terminations were provided to customer in accordance with the F.C .C. Docket No. 20099 Settlement Agreement.

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11.3.3. Digital Hierarchy Channel Interface Codes (4DS)

Customers selecting the multiplexed four-wire DSX-1 or higher facility interface option at the customer designated premises will be requested to provide subsequent system and channel assignment data. The various digital bit rates in the digital hierarchy employ the channel interface code 4DS8, 4DS0 or 4DS6 plus the speed options indicated below:

Interface Code and Speed Option	Nominal Bit Rate (Mbps)	Digital Hierarchy Level
4DS8-15	1.544	DS1
4DS8-31	3.152	DS1C
4DS0-63	6.312	DS2
4DS6-44	44.736	DS3
4DS6-27	274.176	DS4

11.3.4 Service Designator/Network Channel Code Conversation Table

The purpose of this table is to show the relationship between the service designator codes (e.g., VGC, MT2, etc.) and the network channel codes that are used for:

Service Designator Code	Network Channel Code
MTC	MQ
MT1	NT
MT2	NU
MT3	NV
TGC	NQ
TG1	NW
TG2	NY
VGC	LQ
VG1	LB

Service Designator Code	Network Channel Code

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VG2	LC
VG3	LD
VG4	LE
VG5	LF
VG6	LG
VG7	LH
VG8	LJ
VG9	LK
VG10	LN
VG11	LP
VG12	LR
APC	PQ
AP1	PE
AP2	PF
AP3	PJ
AP4	PK
TVC	TQ
TV1	TV
TV2	TW
DA1	XA
DA2	XB
DA3	XG
DA4	XH
HCO	HS
HC1	HC
HC1C	HD
HC2	HE
HC3	HF
HC4	HG

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11.3.5 Comnatible Channel Interfaces

The following tables show the channel interface codes (CIs) which are compatible:

(A) Metallic

Comnatible CIs	
2DC8-1	2DC8-2
2DC8-3	2DC8-3
4DS8-*	2DC8-1
4DS8-*	2DC8-2

(B) Telegraph Grade

Cornpatible CIs		Compatible CIs	
2DB-10	10IA8	4DB2-10	10IA8
	2TT2-2		2TT2-2
	4TT2-2		4TT2-2
2DB2-43+	10IA8	4DB2-43+	10IA8
	2TT2-2		2TT2-6
	2TT2-6		4TT2-2
	4TT2-2		
	4DS8-*	10IA8	
2TT2-2	2TT2-2		2TT2-2
			2TT2-6
2TT2-3	2TT2-2		4TT2-2
	4TT2-2		4TT2-6

* See 11.3.3 preceding for explanation.

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Comnatible CIs		Compatible CIs	
2TT2-6	2TT2-6	4TT2-2	4TT2-2
		4TT2-6	
		4TT2-6	2TT2-6

(C) Voice Grade

Compatible CIs		Comnatible CIs		Compatible CIs	
2AB2	2AC2	2DB2	2DA2	2LR2	2LR2
2AB3	2AC2	2DB3	2DA2	2LR3	2LR2
2CT3	2DY2	2DX3	2LA2	2LS2	2LA2
	4DS8*		2LB2		2LB2
	4DX2		2LC2		2LC2
	4DX3		2LO3		
	4DY2		2LS2	2LS3	2LA2
	4EA2-E		2LS3		2LB2
	4EA2-M				2LC2
	4SF2	2GO2	2GS2		
	4SF3		2GS3	2NO2	2DA2
	6DX2				2NO2
	6DY2	2GO3	2GS2		
	6DY3		2GS3	2NO3	2NO2
	6EA2-E				2PR2
	6EA2-M	2LO2	2LS2		
	6EB2-E		2LS3	2TF3	2TF2
	6EB2-M				
	6EB3-E	2LO3	2LS2		
	8EB2-E		2LS3		
	8EB2-M				
	8EC2				
	9DY2				
	9DY3				
	9EA2				
	9EA3				

* See 11.3.3 preceding for explanation.

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Compatible CIs		Compatible CIs		Compatible CIs	
4AB2	2AC2	4DS8-*	2AC2	4DS8-*	4DG2
	4AB2		2DA2		4LR2
	4AC2		2DY2		4LS2
	4SF2		2GO2		4NO2
			2GO3		4PR2
4AB3	2AC2		2GS2		4RV2-T
	4AC2		2GS3		4SF2
	4SF2		2LA2		4SF3
			2LB2		4TF2
4AC2	2AC2		2LC2		6DA2
	4AC2		2LO2		6DY2
			2LO3		6DY3
4DA2	4DA2		2LR2		6EA2-E
4DB2	2DA2		2LS2		6EA2-M
	2NO2		2LS3		6EB2-E
	2PR2		2NO2		6EB2-M
	4DA2		2PR2		6GS2
	4DB2		2RV2-T		6LS2
	4NO2		2TF2		8EB2-E
	4PR2		4AC2		8EB2-M
	6DA2		4DA2		9DY2
			4DE2		9DY3
4DD3	2DE2		4DX2		9EA2
	4DE2		4DX3		PEA3
			4DY2		
			4EA2-E		
			4EA2-M		

* See 11.3.3 preceding for explanation.

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Compatible CIs		Compatible CIs		Compatible CIs	
4DX2	2DY2	4DX2	8EB2-E	4DX3	6DY2
	2LA2		8EB2-M		6DY3
	2LB2		9DY2		6EA2-E
	2LC2		9DY3		6EA2-M
	2LO3		9EA2		6EB2-E
	2LS2		9EA3		6EB2-M
	2LS3				6LS3
	2RV2-T	4DX3	2DY2		8EB2-E
	4DX2		2LA2		8EB2-M
	4DY2		2LB2		9DY2
	4EA2-E		2LC2		9DY3
	4EA2-M		2LO3		9EA2
	4LS2		2LS2		9EA3
	4RV2-T		2LS3		
	4SF2		2RV-T	4DY2	2DY2
	4SF3		4DX2		4DY2
	6DY2		4DX3		
	6DY3		4DY2		
	6EA2-E		4EA2-E		
	6EA2-M		4EA2-M		
	6EB2-E		4LS2		
	6EB2-M		4RV2-T		
	6LS2		4SF2		
			4SF3		

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11. Interface Grouns. Transmission Specifications. Channel Interfaces. Special Access Optional Features and Functions. and Technical Specification Packages

Compatible CIs	Compatible CIs	Compatible CIs	Compatible CIs
4EA2-E	2DY2	4EA3-E 2DY2	4GO2 2GO2
	4DY2	4DY2	2GO3
	4EA2-E	4EA2-E	2GS2
	4EA2-M	4EA2-M	2GS3
	4SF2	4SF2	4GS2
	6DY2	6DY2	4SF2
	6DY3	6DY3	6GS2
	6EB2-E	6EA2-E	
	6EB2-M	6EA2-M	4GO3 2GO2
	8EB2-E	6EB2-E	2GS2
	8EB2-M	6EB2-M	2GS3
	9DY2	8EB2-E	4GS2
	9DY3	8EB2-M	4SF2
		9DY2	6GS2
4EA2-M	2DY2	9DY3	
	4DY2	9EA2	
	4EA2-M	9EA3	
	4SF2		
	6DY2		
	6DY3		
	6EB2-E		
	6EB2-M		
	8EB2-E		
	8EB2-M		
	9DY2		
	9DY3		

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11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Pack-

Compatible CIs		Compatible CIs		Compatible CIs	
4LO2	2LS2	4LS3	2LA2	4SF2	2LO3
	2LS3		2LB2		2LR2
	4LS2		2LC2		2LS2
	4SF2		2LO2		2LS3
	6LS2		2LO3		2RV2-T
			4SF2		4AC2
4LO3	2LS2				4DY2
	2LS3	4NO2	2DA2		4LS2
	4LS2		2DE2		4RV2-T
	4SF2		2NO2		4SF2
	6LS2		4DA2		6DY2
			4DE2		6DY3
4LR2	2LR2		4NO2		6GS2
	4LR2		6DA2		9DY2
	4SF2				9DY3
		4RV2-0	2RV2-T		
4LR3	2LR2		4RV2-T	4SF3	2DY2
	4LR2		4SF2		2GO3
	4SF2				2GS2
		4SF2	2AC2		2GS3
4LS2	2LA2		2DY2		2LA2
	2LB2		2GS2		2LB2
	2LC2		2GS3		2LC2
	2LO2		2LA2		2LO3
	2LO3		2LB2		2LR2
			2LC2		

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11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Packages

Compatible CIs		Compatible CIs		Compatible CIs	
4SF3	2LS2	6DA	4DA2	6DY3	2DY2
	2LS3		6DA2		4DY2
	2RV2-T				6DY2
	4DY2	6DX2	2DY2		6DY3
	4EA2-E		4DY2		
	4EA2-M		4EA2-E	6EA2-E	2AC2
	4GS2				
	4LR2		4EA2-M		2DY2
	4LS2		4SF2		2LA2
	4RV2-T		6DY2		2LB2
	4SF2		6DY3		2LC2
	4SF3		6EA2-E		2LO3
	4DY2		6EA2-M		2LS2
	6DY3		6EB2-E		2LS3
	6EB2-E		6EB2-M		2RV2-T
	6EB2-M		8EB2-E		4AC2
	6GS2		8EB2-M		4DY2
	6LS2		9DY2		4EA2-E
	9DY2		9DY3		4EA2-M
	9DY3		9EA2		4LS2
	9EA2		9EA3		4RV2-T
	9EA3				4SF2
		6DY2	2DY2		4SF3
	4TF2 2TF2		4DY2		6DY2
	4TF2		6DY2		6DY3
					6EA2-E
					6EA2-M

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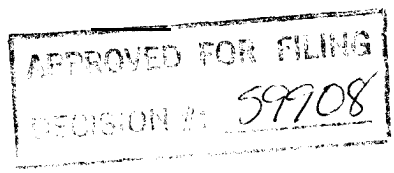
Compatible CIs		Compatible CIs		Compatible CIs	
6EA2-E	6EB2-E	6EA2-M	6DY2	6EB3-E	2DY2
	6EB2-M		6DY3		4DY2
	6LS2		6EA2-M		4EA2-E
	8EB2-E		6EB2-E		4EA2-M
	8EB2-M		6EB2-M		4SF2
	9DY2		6LS2		6DY2
	9DY3		8EB2-E		6DY3
			8EB2-M		6EA2-E
6EA2-M	2AC2		9DY2		6EA2-M
	2DY2		9DY3		8EB2-E
	2LA2				8EB2-M
	2LB2	6EB2-E	2DY2		9DY2
	2LC2		4DY2		9DY3
	2LO3		4SF2		9EA2
	2LS2		6DY2		9EA3
	2LS3		6DY3		
	2RV2-T		6EB2-E	6EX2-A	2GS2
	4AC2		6EB2-M		2GS3
	4DY2		9DY2		2LS2
	4EA2-E		9DY3		2LS3
	4EA2-M				4GS2
	4LS2	6EB2-M	2DY2		4LS2
	4RV2-T		4DY2		4SF2
	4SF2		4SF2		6GS2
	4SF3		6DY2		6LS2
			6DY3		
			6EB2-M		
			9DY2		
			9DY3		

11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Packages

Compatible CIs		Compatible CIs		Compatible CIs	
6EX2-B	2GO3	8EB2-E	2AC2	8EB2-M	2AC2
	2LA2		2DY2		2DY2
	2LB2		2LA2		2LA2
	2LC2		2LB2		2LB2
	2LO2		2LC2		2LC2
	2LO3		2LO3		2LO3
	2LR2		2LS2		2LS2
	4LR2		2LS3		2LS3
	4SF2		2RV2-T		2RV2-T
			4AC2		4AC2
6GO2	2GO2		4DY2		4DY2
	2GS2		4LS2		4LS2
	2GS3		4RV2-T		4RV2-T
	4GS2		4SF2		4SF2
	4SF2		4SF3		4SF3
	6GS2		6DY2		6DY2
			6DY3		6DY3
6LO2	2LS2		6EB2-E		6EB2-E
	2LS3		6EB2-M		6EB2-M
	4LS2		6LS2		6LS2
	4SF2		8EB2-E		8EB2-M
	6LS2		8EB2-M		9DY2
			9DY2		9DY3
6LS2	2LA2		9DY3		
	2LB2				
	2LC2				
	2LO2				
	2LO3				
	4SF2				



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11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Packages

Compatible CIs		Compatible CIs		Compatible CIs	
8EC2	2DY2	9DY2	2DY2	9EA3	2DY2
	4DY2		4DY2		4DY2
	4EA2-E		6DY2		4EA2-E
	4EA2-M		6DY3		4EA2-M
	4SF2		9DY2		6DY2
	6DY2				6DY3
	6DY3	9DY3	2DY2		6EA2-E
	6EA2-E		4DY2		6EA2-M
	6EA2-M		6DY2		6EB2-E
	6EB2-E		6DY3		6EB2-M
	6EB2-M		9DY2		8EB2-E
	8EB2-E		9DY3		8EB2-M
	8EB2-M				9DY2
	9DY2	9EA2	2DY2		9DY3
	9DY3		4DY2		9EA3
	9EA2		4EA2-E		
	9EA3		4EA2-M		
			6DY2		
			6DY3		
			6EA2-E		
			6EA2-M		
			6EB2-E		
			6EB2-M		
			8EB2-E		
			8EB2-M		
			9DY2		
			9DY3		
			9EA2		
			9EA3		

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(D) Program Audio

Compatible CIs		Compatible CIs	
2PG2-1	2PG1-1 2PG2-1	4DS8-15E	2PG1-3 2PG2-3
2PG2-3	2PG1-3 2PG2-3	4DS8-15F	2PG1-5 2PG2-5
2PG2-5	2PG1-5 2PG2-5	4DS8-15G	2PG1-8 2PG2-8
2PG2-8	2PG1-8 2PG2-8	4DS8-15H	2PG1-1 2PG2-1

(E) Video

Compatible CIs		Compatible CIs	
2TV6-1	4TV6-15 4TV7-15	4TV7-5	4TV6-5 4TV7-5
2TV6-2	6TV6-15 6TV7-15	4TV7-15	4TV6-15 4TV7-15
2TV7-1	4TV6-15 4TV7-15	6TV6-5	6TV6-5 6TV7-5
2TV7-2	6TV6-15 6TV7-15	6TV6-15	6TV6-15 6TV7-15

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Compatible CIs		Comnatible CIs	
4TV6-5	4TV6-5 4TV7-5	6TV7-5	6TV6-5 6TV7-5
4TV6-15	4TV6-15 4TV7-15	6TV7-15	6TV6-15 6TV7-15

(F) Digital Data

Compatible CIs		Comnatible CIs		Comnatible CIs	
4DS8-15	4DS8-15 + 4DU5-24 4DU5-48 4DU5-56 4DU5-96 6DU5-24 6DU5-48 6DU5-96	4DU5-24 4DU5-48 4DU5-96 4DU5-56	4DU5-24 4DU5-48 4DU5-96 4DU5-56	6DU5-24 6DU5-48 6DU5-56 6DU5-96	6DU5-24 6DU5-48 6DU5-56 6DU5-96

(G) High Capacity

Comnatible CIs		Compatible CIs	
4DSO-63	4DSO-63 4DU8-A, B OR C 6DU8-A, B OR C	4DS8-15J	4DU8-A 6DU8-A
4DS6-27	4DS6-27 4DU8-A, B OR C 6DU8-A, B OR C	4DS8-15K	4DU8-B 4DU8-C 6DU8-B 6DU8-C

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Compatible CIs		Compatible CIs	
4DS6-44	4DS6-44 4DU8-A, B OR C 6DU8-A, B OR C	4DS8-31	4DS8-31 4DU8-A, B OR C 6DU8-A, B OR C
4DS8-15	4DS8-15 + 4DU8-B 6DU8-B	4DU8-A, B ORC	4DU8-A, B OR C

11.4 WATS Access Channel Interfaces and Network Channel Codes

This section explains the Channel Interface codes and Network Channel Codes that the customer must specify when ordering WATS Access Service. An example which explains the specific characters of the codes, a glossary of Channel Interface codes impedance levels are set forth in 11.3 preceding.

11.4.1 Service Designator/Network Channel Code Conversion Table

The purpose of this table is to show the relationship between the service designator codes and the network channel codes that are used for WATS Access Service.

Service Designator Code	Network Channel Code
WAL (Standard & Improved)	SE

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11.4.2 Compatible Channel Interfaces

CIs	Compatible CIs
2GS 2GS	4GS 2GS
2LS	2LS
4GS	4GS
4LS	4LS
2LS 2GS	4LS 2GS
2LS	2LS
4GS	4GS
4LS	4LS

11.5 Special Access Voice Grade Optional Features and Functions and Technical Specifications Package

(A) Central Office Bridging Capability

(1) Voice Bridging (two-wire and four-wire)

(2) Data Bridging (two-wire and four-wire)

(3) Telephone Bridging (two-wire and four-wire)

(4) DATAPHONE Select-A-Station Bridging with sequential arrangement ports or addressable arrangement ports

(5) Telemetry and Alarm Bridging

Split Bank, Active Bridging,
Passive Bridging,
Summation, Active Bridging

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(B) Central Office Multiplexing

Voice to Telegraph Grade. An arrangement that converts a Voice Grade channel to Telegraph Grade channels using frequency division multiplexing.

(C) Conditioning

Conditioning provides more specific transmission characteristics for Voice Grade services. C-Type conditioning controls attenuations distortion and envelope delay distortion. Sealing Current helps maintain continuity on dry metallic loops.

For two-point services, the parameters apply to each service. For multipoint services, the parameters apply to each mid-link or end link. C-Type conditioning and Data Capability may be combined on the same service.

(1) C-Type Con ditioning

C-Type Conditioning is provided for the additional control of attenuation distortion and envelope delay distortion on data services. The attenuation distortion and envelope delay distortion specifications for C-Type Conditioning are:

Attenuation Distortion (Frequency Response) Relative to 1004 Hz		Envelop Delay Distortion	
Frequency Range (Hz)	Variation dB	Frequency Range (Hz)	Variation (micro-seconds)
		1000-2600	100
400-2800	-1.0 to +2.0	800-2600	200
300-3000	-1.0 to +3.0	600-2600	300
3000-3200	-2.0 to +6.0	500-2800	600
		500-3000	3000

(2) Sealing Current Conditioning

11. Interface Groups. Transmission Specifications . Channel Interfaces. Special Access Optional Features and Functions. and Technical Specification Packages

Sealing Current Conditioning is provided to help maintain continuity on dry metallic loops. It is usually associated with four-wire DA or NO type channel interfaces.

(D) Customer Specified Premises Receive Level

This option allows the customer to specify the receive level at the Point of Termination. The level must be within a specific range on effective four-wire transmission. The ranges are delineated in Technical Reference PUB 62501.

(E) Improved Return Loss

(1) On Effective Four-Wire Transmission at Four-Wire Point of Termination (applicable to each two-wire port): Provides for a fixed 600 ohm impedance, variable level range and simplex reversal. Telephone Company equipment is required at the customer's premises where this option is ordered. The Improved Return Loss parameters are delineated in Technical Reference PUB 62501.

(2) On Effective Two-Wire Transmission at Two-Wire Point of Termination: Provides for more stringent Echo Control specifications. In order for this option to be applicable, the transmission path must be four-wire at one POT and two-wire at the other POT. Placement of Telephone Company equipment may be required at the customer's premises with the two-wire POT. The Improved Return Loss parameters are delineated in Technical Reference PUB 62501.

11. Interface Groups. Transmission Specifications. Channel Interfaces. Special Access Optional Features and Functions. and Technical Specification Packages

(F) Data Capability (D) Conditioning

Data Capability provides transmission characteristics suitable for data communications. Specifically, Data Capability provides for the control of Signal to C-Notched Noise Ratio and intermodulation distortion. It is available for two-point services or three-point multipoint services. The Signal to C-Notched Noise Ratio and intermodulation distortion parameter for Data Capability are:

Signal to C-Notched Noise Ratio is equal to or greater than 32 dB.
Inter-modulation distortions.
Signal to second order modulation products (R2) is equal to or greater than 38 dB.
Signal to third order modulation products (R3) is equal to or greater than 42 dB.

When a service equipped with Data Capability is used for voice communications, the quality of the voice transmission may not be satisfactory.

(G) Telephoto Capability

Telephoto Capability provides transmission characteristic suitable for telephotographic communications. Specifically, Telephoto Capability is provided for the control of attenuation distortion and envelope delay distortion on telephotographic services. The attenuation distortion and envelop delay distortion parameters for Telephoto Capability are:

Attenuation Distortion (1004 Hz Reference)		Envelop Delay Distortion	
Frequency (dB)ge (Hz)	Variation	Frequency Range (Hz)	Variation (mcs)
500-3000	-0.5 to +1.5	1000-2600	110
300-3200	-1.0 to +2.5	800-2800	180

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(H) Signaling Capability

Signaling Capability provides for the ability to transmit signals from one customer premises to another customer premises on the same service.

(I) Selective Signaling Arrangement

An arrangement that permits code selective ringing for up to ten codes on a multipoint service.

(J) Transfer Arrangement

An arrangement that affords the customer an additional measure of flexibility in the use of their access channel(s). The arrangement can be utilized to transfer a leg of a Special Access Service to another channel that terminates in either the same or a different customer premises. A key activated or dial-up control service is required, to operate the transfer arrangement. A spare channel, if required, is not included as part of the option.

(K) Public Packet Switching Network (PPSN) Interface Arrangement

An arrangement that provides the interface requirements that permit a Voice Grade service to interface with a Public Packet Switching Network packet switch located in a Telephone Company premises. The interface is compatible with X.25 and X.75 packet switching protocols as defined by the CCITT.

(L) Four-Wire/Two Wire Conversions

When a customer requests that an effective four-wire channel be terminated with a two-wire channel interface at the customer's designated premises, a four-wire conversion is required. The rate for the conversion is included as part of the basic Channel Termination rate.

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The following table shows the technical specifications packages with which the optional features and functions are available.

	Availability with Technical Specifications Package VG-												
	C	1	2	3	4	5	6	7	8	9	10	11	12
C-Type Conditioning	X					x	x	x	x	x	x		
Central Office Bridging Capability	X		X			x	x				x	x	x
Central Office Multiplexing	X						X						
Customer Specified Premises Receive Level	X		x	x				x	x	x			
Data Capability	X						x	x			X		
Improved Return Loss For Effective Four-Wire Transmission	x	x	x	x	x	x	x	x	x	x	x	x	x
For Effective Two-Wire Transmission	X		x	x				X					
PPSN Interface Arrangement	X									X			
Sealing Current Conditioning	X					X							
Selective Signaling Arrangement	X		X			x	x				x	x	x
Signaling Capability	x	x	x	x	x			x	x	x			
Telephoto Capability	X											X	
Transfer Arrangement	x	x	x	x	x	x	x	x	x	x	x	x	x

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11.5.1 Special Access Digital Data Service Optional Features and Functions and Technical Specifications Package

The Optional Features and Functions described in (A), (B), and (C) following are only available where Digital Data Service is provided via a hub.

(A) Central Office Bridging Capability

(B) Transfer Arrangement

An arrangement that affords the customer an additional measure of protection and/or flexibility in the use of their access channel(s) on a 1xN basis. The arrangement can be utilized to transfer a leg of a Special Access Service to either a spare or working channel that terminates in either the same or a different customer designated premises. This arrangement is only available at a Telephone Company designated hub. A key activated or dial-up control service is required to operate the transfer arrangement. A spare channel, if required, is not included as a part of the option.

(C) Public Packet Switching: Network (PPSN) Interface Arrangement

An arrangement that provides the interface requirements which permit a Digital Data Service to interface with a Public Packet Switching Network packet switch located in a Telephone Company premises. The interface is compatible with X.25 and X.75 packet switching protocols as defined by the CCITT.

The following table shows the technical specifications packages with which the optional features and functions are available.

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Optional Features and Functions	D1	D3
Central Office Bridging Capability	x	x
PPSN Interface Transfer Arrangement	X	X
Transfer Arrangement	x	x

11 .5.2 Special Access High Capacity Service Optional Features and Functions and Technical Specifications Package

(A) Automatic Loop Transfer

The Automatic Loop Transfer provides protection on a 1xN basis against failure of the facilities between a customer designated premises and the wire center serving that premises. Protection is furnished through the use of a switching arrangement that automatically switches to a spare channel line when a working line fails. The spare channel is not included as part of the option. This option requires compatible equipment at both the serving wire center an d the customer designated premises. The customer is responsible for providing the equipment at its designated premises.

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11. Interface Groups. Transmission Specifications. Channel Interfaces. Special Access Op ional Features and Functions. and Technical Specification Pack-

(B) Transfer Arrangement

An arrangement that affords the customer an additional measure of flexibility in the use of their access channel(s). The arrangement can be utilized to transfer a leg of a Special Access Service to either a spare or working channel that terminates in either the same or a different customer designated premises. A key activated or dial-up control service is required to operate the transfer arrangement. A spare channel, if required, is not included as part of the option.

(C) Central Office Multiplexing

(1) DS3 to DS1

An arrangement that converts a 44.736 Mbps channel to 28 DS1 channels using digital time division multiplexing.

(2) DS1 to Voice

An arrangement that converts a 1.544 Mbps channel to 24 channels for use with Voice Grade Services. A channel(s) of this DS1 to the Hub can also be used for a Digital Data Service.

(3) DS1 to DSO

An arrangement that converts a 1.544 Mbps channel to 23 64.0 kbps channels utilizing digital time division multiplexing.

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(D) Clear Channel Capabi lity

(1) Clear Channel Capability is an arrangement that allows a customer to transport 1.536 Mbps information rate signals over a 1.544 Mbps High Capacity channel or over a 1.544 Mbps High Capacity channel derived from a multiplexed 44.736 Mbps High Capacity channel with no constraint on the quantity or sequence of one and zero bits. This arrangement requires the customer signal at the channel interface to conform to Bipolar with Eight Zero Substitution (B8zs) line code as described in Technical Reference TR-NPL-000054 and Technical Reference TR-INS-000342.

(2) Clear Channel Capability is provided, subject to availability of facilities, and DS1/1.544 Mbps High Capacity channels between two customer designated premises and on multiplexed DS#/44.736 Mbps High Capacity channels or multiplexed DS1/1.544 Mbps High Capacity channels (available only on a DSl-to-Digital multiplexed configuration) between a telephone company hub office and a customer designated premises.

(3) The Clear Channel Capability optional feature may be ordered at the same time the High Capacity service is ordered or it may be ordered as an addition to an existing High Capacity Service. The customer must agree to out-of-service periods required to add this feature to an existing High Capacity Service.

The following table shows the technical specifications packages with which the optional features and functions are available.

11. Interface Groups. Transmission Specifications. Channel Interfaces. Special Access Optional Features and Functions. and Technical Specification Pack-

	Package	
	HC1	HC3
Optional Features and Functions		
Automatic Loop Transfer	X	
Central Office Multiplexing:		
DS3 to DS1		X
DS1 to Voice	X	
DS1 to DSO	X	
Transfer Arrangement	X	

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11. Interface Groups, Transmission Specifications, Channel Interfaces, Special Access Optional Features and Functions, and Technical Specification Packages

11.6 Special Access Technical Specifications Packages

Parameter	C*	Package VG- 1	2	3	4	5	6	7	8	9	10	11	12
Attenuation Distortion	X	X	X	X	X	X	X	X	X	X	X	X	X
C-Message Noise	X	X	X	X	X	X	X	X	X	X	X	X	X
Echo Control	X	X	X	X		X		X	X			X	X
Envelop Display Distortion	X						X	X	X	X	X	X	X
Frequency Shift	X						X	X	X	X	X	X	X
Impulse Noise	X					X	X	X	X	X	X	X	X
Intermodulation Distortion	X						X	X	X	X	X	X	X
Loss Deviation	X	X	X	X	X	X	X	X	X	X	X	X	X
Phase Hits, Gain Hits, and Dropouts	X												
Phase Jitter	X						X	X	X	X	X	X	X
Signal-to-C Message Noise					X								
Signal-to-C Notch Noise	X					X	X	X	X	X	X	X	X

* The desired parameters are selected by the customer from the list of available parameters.

The technical specifications for these parameters (except for dropouts, gain hits, and phase hits) are delineated in Technical Reference PUB 62501 and associated Addendum. The technical specifications for dropouts, phase hits, and gain hits are delineated in Technical Reference PUB 41004, Table 4.

ARIZONA TELEPHONE COMPANY
Arizona

12. Rates and Charges

All the rates and charges for the services offered in this tariff are shown in this section. Reference is made for each rate element to the appropriate tariff paragraph where the application of the service is described.

		Monthly Rates	Source	
12.1	Switched Access Service			(T) (T)
(A)	Carrier Common Line			
	(1) Originating Per Access Minute	$ .010000	3.7.E	(R)
	(2) Terminating Per Access Minute	.030215	3.7.E	(R)
(B)	End Office			
	(1) Local Switching Per Access Minute	.044054	6.1.3(B)(2)	(I)
	(2) Directory Assistance Information Surcharge Per Access Minute	N/A	6.1.3(B)(2)	
(C)	Local Transport			
	(1) Local Transport Termination Per Access Minute	.020597	6.1.3(A)	(R)
	(2) Local Transport Facility Per Access Minute Per Mile	N/A	6.1.3(A)	
(D)	Equal Access - Per Access Minute	.000068		
(E)	Installation Charge Per Installation	229.95	6.6.1(B)	

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BY: Lou E. Reilly, President

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ACCESS SERVICE

12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
12.2 Special Access Service			
12.2.1 Surcharge for Special Access Service			
(A) Per Voice Grade Equivalent	$ 25.00		7.3.4
12.2.2 Voice Grade Service			
(A) Channel Termination per Termination			
- Two Wire	$ 50.50	$ 150.15	7.2.1(A)
- Four Wire	$ 69.89	$ 150.15	7.2.1(A)
(B) Channel Mileage			
(1) Channel Mileage Facility per Mile	$ 1.90		7.2.1(B)
(2) Channel Mileage Termination per Termination	$ 66.47		7.2.1(B)

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ACCESS SERVICE

12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
(C) Optional Features and Functions			
(1) Bridging			
(a) Voice Bridging per Port			
Two Wire	$ 6.15		11.5(A)
Four Wire	$ 6.15		11.5(A)
(b) Data Bridging per Port			
- Two Wire	$ 6.15		11.5(A)
- Four Wire	$ 6.15		11.5(A)
(c) Telephoto Bridging per port			
- Two Wire	$ 6.15		11.5(A)
- Four Wire	$ 6.15		11.5(A)

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ACCESS SERVICE

12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
(1) Bridging (Continued)			
(d) DATAPHONE Select-A-Station Bridging			
Sequential Arrangement, Ports - per channel connected			
- Two Wire	$ 22.19		11.5(A)
- Four Wire	$ 117.70		11.5(A)
Addressable Arrangement, Ports - per channel connected			
- Two Wire	$ 23.75		11.5(A)
- Four Wire	$ 102.80		11.5(A)
(e) Telemetry and Alarm Bridging			
Active Bridging Channel Connections - per channel connected			
- Split Band	$ 8.89		11.5(A)
- Summation	$ 3.47		11.5(A)

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12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
Passive Bridging Channel Connections - per channel connected	$ .24		11.5(A)
(2) Conditioning Per Termination			
- C type	$ 7.90		11.5(C)
- Data Capability	$ 5.30		11.5(F)
- Telephoto Capability	$ 9.02		11.5(G)
(3) Improved Return Loss for Effective Two Wire or Four Wire Transmission - per Termination			
- Two Wire	$ 13.35		11.5(E)
- Four Wire	$ 13.35		11.5(E)
(4) Customer Specified Receive Level - per two wire termination	$ 8.80		11.5(D)
(5) Multiplexing - per arrangement Voice to Telegraph Grade	$ 226.19		11.5(B)
(6) Signaling Capability per termination	$ 13.50		11.5(H)
(7) Selective Signaling Arrangement per arrangement	$ 6.50		11.5

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12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
(8) Transfer Arrangement			
- per four port arrangement including control channel termination*	$ 3.13		11.5(J)
- per five port arrangement including control channel termination*	$ 7.14		11.5(J)
(9) Public Packet Switching Network Interface Arrangement per arrangement	ICB		11.5(K)

* An additional Channel Termination charge will apply whenever a spare channel is configured as a leg to the customer designated premises. Additional channel mileage charges will also apply when the transfer arrangement is not located in the customer designated premises serving wire center.

12.2.3 Digital Data Service

(A) Channel Termination per termination			
- 2.4 kbps	$67.23	$176.00	7.2.1(A)
- 4.8 kbps	$67.23	$176.00	7.2.1(A)
- 9.6 kbps	$67.23	$176.00	7.2.1(A)
- 56.0 kbps	$67.23	$176.00	7.2.1(A)

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12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
(B) Channel Mileage			
(1) Channel Mileage Facility per mile			
- 2.4 kbps	$ 2.59		7.2.1(B)(1)
- 4.8 kbps	$ 2.59		7.2.1(B)(l)
- 9.6 kbps	$ 2.59		7.2.1(B)(l)
- 56.0 kbps	$ 5.19		7.2.1(B)(1)
(2) Channel Mileage Termination per termination			
- 2.4 kbps	$26.01		7.2.1(B)(2)
- 4.8 kbps	$26.01		7.2.1(B)(2)
- 9.6 kbps	$26.01		7.2.1(B)(2)
- 56.0 kbps	$52.02		7.2.1(B)(2)
(C) Optional Features and Functions			
(1) Bridging per port	$ 7.85		11.5.1(A)
(2) Loop Transfer Arrangement per four port arrangement*	$ 6.21		11.5.1(B)
(3) Public Packet Switching Network Interface Arrangement			
- per 9.6 kbps arrangement	ICB		11.5.1(C)
- per 56.0 kbps arrangement	ICB		11.5.1(C)

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12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
12.2.4 High Capacity Service			
(A) Channel Termination per Termination			
- 1.544 Mbps	$ 266.87	$ 178.00	7.2.1(A)
- 3.152 Mbps	ICB	ICB	7.2.1(A)
- 6.312 Mbps	ICB	ICB	7.2.1(A)
- 44.736 Mbps	$2,802.11	$941.60	7.2.1(A)
- 274.176 Mbps	ICB	ICB	7.2.1(A)
(B) Channel Mileage			
(1) Channel Mileage Facility per mile			
- 64 kbps*	$ 5.83		7.2.1(B)(1)
- 1.544 Mbps	$ 33.76		7.2.1(B)(1)
- 3.152 Mbps	ICB		7.2.1(B)(l)
- 6.312 Mbps	ICB		7.2.1(B)(l)
- 44.736 Mbps	$ 371.35		7.2.1(B)(1)
- 274.176 Mbps	ICB		7.2.1(B)(l)

* An additional Channel Termination charge will apply whenever a spare channel is configured as a leg to the customer designated premises. Additional Channel Mileage charges will also apply when the transfer arrangement is not located in the customer designated premises serving wire center.

* Applies to through connections of 2.4, 4.8, 9.6, 56.0 and 64 kbps.

(2) Channel Mileage Termination per termination			
- 64 kbps*	$ 58.52		7.2.1(B)(2)
- 1.544 Mbps	$ 156.02		7.2.1(B)(2)
- 3.152 Mbps	ICB		7.2.1(B)(2)
- 6.312 Mbps	ICB		7.2.1(B)(2)

12. Rates and Charges

	Monthly Rates	Non-Recurring Charges	Source
- 44.736 Mbps	$858.11		7.2.1(B)(2)
- 274.176 Mbps	ICB		7.2.1(B)(2)
(C) Optional Features and Functions			
(1) Multiplexing, per arrangement			
DS3 to DS1	$711.40		11.5.2(C)(1)
DS1 to Voice	$212.35		11.5.2(C)(2)
DS1 to DSO	$268.60		11.5.2(C)(3)
(2) Automatic Loop Transfer per arrangement	$202.60		11.5.2(A)
(3) Transfer Arrangement per four port arrangement including control channel termination* *	$ 172.20		11.5.2(B)

* Applies to through connections of 2.4, 4.8, 9.6, 56.0 and 64 Kbps.

** An additional Channel Termination charge will apply whenever a spare channel is configured as a leg to the customer designated premises. Additional Channel Mileage charges will also apply when the transfer arrangement is not located in the customer designated premises serving wire center.

12.3 800 Data Base Access Service

A.	Basic Query (per query)	$.0075	4.5.A
B.	Vertical Feature Query (per query)	$.0077	4.5.B

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12. Rates and Charges

12.4 Miscellaneous Services

		Basic time, scheduled working hours	Overtime Outside scheduled working hours	Source
(A)	Additional Eng. Periods			
	Per engineer, 1/2 hour or fraction thereof,	$16.00	$19.00	9.1
(B)	Additional Labor			
	Per technician, 1/2 hour or fraction thereof,	$13.00	$15.00	9.2
(C)	Maintenance of Service			
	Per technician, 1/2 hour or fraction thereof,	$13.00	$15 .00	9.3
(D)	Presubscription			
	Per order	$ 5.00		9.4

12.5 Access Orders

(A)	Access Order Charge Per Order	29.00		5.2
(B)	Order Change Charge Per Order	29.00		5.2.2

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